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THE AGRICULTURAL SITUATION IN THE FAR EAST AND OCEANIA

Review of 1970 and Outlook for 1971

U.S. DEPARTMENT OF AGRICULTURE
ECONOMIC RESEARCH SERVICE

Washington, D.C.

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ABSTRACT

Most countries of the Far East and Oceania estimated significant gains in GNP for 1970. Farm production was up in all countries except in Japan, Korea, Cambodia, and New Zealand. Most gains can be attributed to the increased use of modern technology, particularly more fertilizer, high-yielding seeds, and irrigation. If average weather prevails, total farm production is likely to rise again in 1971 in all developing countries except possibly those of Indo-China. Programs to restrict rice production in Japan and wheat in Australia will keep the total outturn for the developed countries near the 1970 level. Reflecting an upgrading of the average diet, the market for imported farm products is expanding and diversifying. U.S. exports of agricultural commodities to the region reached a record $2.5 billion in 1970. U.S. exports to Japan topped $1 billion. Nevertheless, the United States faces increased competition for Far East markets, most notably from Australia and Western Europe.

Key Words: Foreign agriculture, Asia, Far East and Oceania, food production, foreign trade, imports, exports, outlook.

FOREWORD

This annual publication of the U.S. Department of Agriculture provides an analytical basis for shortrun policy decisions and informs an interested public about current agricultural developments in the Far East and Oceania. It is one of five regional supplements to The World Agricultural Situation, WAS 1, November 1970. Other regional reports are published for Western Europe, The Communist Areas, Africa and the Middle East, and the Western Hemisphere.

Statistical information relating to production and trade of agricultural products in the region appears in a separate publication, The 1970 Agricultural Data Book for The Far East and Oceania, ERS Foreign 267, November 1970. An updated version will be released in the second half of 1971.

This report was directed and coordinated by the undersigned. Others participating in the preparation include Robert D. Barry, E. Wayne Denney, Charles E. Goode, Nancy Hancock, Mary E. Long, Lorin O. Lovfald, John B. Parker, Jr., and Virginia Salley.

U.S. agricultural attaches in several countries provided background material for this report through periodic situation and commodity reports.

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Far East includes all non-communist Asian countries from Afghanistan east. Oceania refers only to Australia and New Zealand.

Unless otherwise stated, split years mean July-June, tons are metric and dollars are U.S. dollars.

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Washington, D. C. April 1971

SUMMARY

The Far East and Oceania made economic progress in 1970. Except in war-ravaged Cambodia, Laos, and South Vietnam, most countries estimated gains in GNP. Real growth rates approaching or exceeding 10 percent were recorded in Japan, Taiwan, South Korea, Hong Kong, Singapore, and Malaysia; Thailand, Pakistan, India, Australia, and New Zealand achieved real growth rates of 5-10 percent.

Crop losses from adverse weather were about average during the past year. The Indian sub-continent enjoyed its fourth consecutive good summer monsoon. Japan and Taiwan escaped typhoon damage. But three major typhoons struck the Philippines, causing widespread damage to crops. Most devastating of all was a mid-November cyclone that hit coastal areas of East Pakistan just prior to the rice harvest.

Total farm production in the Far East increased 2 percent in 1970. Malaysia sharply increased rubber production and boosted farm output 10 percent. India's agriculture gained 5 1/2 percent, largely due to larger harvests of cereals and peanuts. The gain in India, which accounts for nearly two-fifths of Far East farm production, more than offset declines in Japan, Korea, and Cambodia. A 10-percent reduction in rice acreage, aimed at reducing surpluses, curtailed agricultural production in Japan.

Australia registered little gain while New Zealand dropped by 2.5 percent. Gains from livestock compensated for declines in crop production in these countries. Australia restricted 1970 wheat plantings because of the growing world wheat surplus.

Most gains in agricultural production in recent years have been directly attributable to increased adaptation of modern technology in the developing countries of South and Southeast Asia. Increased yields through use of high-yielding seeds, improved farming practices, and greater use of fertilizers, and other capital inputs have been quite substantial in certain choice farming areas with adequate irrigation. The most spectacular production gains have occurred in South Asia where the wheat outturn increased from 18 million tons in 1967 to 30 million tons in 1970. High-yielding seed plus greatly increased use of fertilizer on irrigated land made such a rapid gain possible. Substantial but less spectacular gains have been made with high-yielding varieties of rice.

Imports of farm inputs by the developing countries of the region now exceed a half-billion dollars annually. The domestic manufacture of fertilizers has expanded very rapidly and several additional plants are presently under construction or are in the planning stage. Farmers in some prosperous areas are turning to the use of machine power. Indian farmers, for example, are expected to purchase 40,000 new tractors in 1971--an estimated 100,000 were in use at the end of 1970. Use of tube-wells and water pumps is multiplying rapidly. There are currently 75,000 tube wells in West Pakistan providing water for 2 million acres. The number of power pumps in East Pakistan is expected to reach 40,000 in 1975, compared with 18,000 in 1970. Besides fertilizers, other agricultural input items increasingly are being manufactured within the region. India's tractor output has tripled since 1965 and local factories will supply half the tractors purchased by farmers in 1971.

A new land-to-the-tiller law was enacted, and implementation was begun in South Vietnam in 1970. Generally, farmland held in larger than family-sized units and used for paddy or certain other basic food crops, will be expropriated with compensation to owners, and redistributed to present tenant cultivators and to certain other eligibles such as dependents of war dead. About 1 million hectares are to be distributed and about half of the country's 1.2 million families who rent land will be affected. Little change in total farm production is anticipated for the short run. However, combined with proper supplementary programs, such tenure reform programs have launched large increases in agricultural production in other countries.

The market for imported farm products is expanding and diversifying. Japan, the major market, imported $4.1 billion of farm products in 1970, compared with $3.7 billion in 1969 and $3.4 billion in 1968. This reflects the upgrading of diets in that increasingly prosperous country. Diets also are changing and improving in the lower income countries, especially in urban areas. For example, the use of vegetable oils more than doubled in Pakistan in the last decade. Imports now supply about 15 percent of the vegetable oils consumed in South Asia.

U.S. exports of farm products to Far East countries reached a record of $2.5 billion in 1970, up from $2 billion in 1969. U.S. exports to Japan, which accounted for nearly half the regions total takings, increased almost one-third. India was second, but its takings were mostly financed under PL 480. Due to severe balance-of-payments problems the Philippines, usually the third-ranking cash market for U.S. farm products in the region, was forced to impose very restrictive import controls. U.S. exports were maintained, however, due to the availability of export financing under CCC credit and PL 480. The leading export items to the Far East region were soybeans, wheat, feed grains, and cotton.

Imports by the United States of Far East agricultural products totaled $856 million, up 6 percent from 1969. The principal items were sugar, rubber, fruits and vegetables, coconut products, tea, spices and cashew nuts. The Philippines was the leading source, followed by Malaysia and Indonesia. Australia was an important source of sugar, and that country and New Zealand were leading sources of meat and wool.

The United States is Japan's largest trading partner, and vice versa. Japan's imports from all sources reached $18.9 billion in 1970, a fourth larger than the year before. Imports of $5.6 billion, or 29 percent of the total, came from the United States. Agricultural commodities accounted for a fourth of total imports from the United States. Japanese exports of U.S. wheat rose 30 percent; corn, 23 percent; sorghum, 34 percent and soybeans, 52 percent. Japan will remove a number of agricultural or food categories from the quantitative import list in 1971, but many restrictions on trade will continue. U.S. imports from Japan totaled $5.9 billion in 1970, of which $37 million were agricultural products.

Australia and New Zealand are strong competitors in the Far East market for farm products. Australia shipped almost a half-billion dollars worth of farm commodities to Japan in 1969/70 while New Zealand exported $119-million worth. Both countries have worked hard to expand sales in Asia, particularly because of prospects that the United Kingdom, historically the major farm export market for both countries, will be admitted to the European Economic Community. The United Kingdom is the major farm export outlet for New Zealand and the third-ranking outlet for Australia, after Japan and the United States.

Other competitors are expanding exports to the Far East and Oceania. Western Europe shipped almost $500 million in agricultural products to the region in 1970, almost double the value recorded in 1966. Western Europe is promoting exports of wheat, dairy products, processed foods, beverages and other items through trade fairs, advertising, liberal credit arrangements, and foreign aid programs. Commercial shipments

account for over 90 percent of the trade but food aid to some South and Southeast Asia countries has been significant. The boom in tourism also has contributed to the demand for European foods, wines, and other beverages.

The outlook is for continued economic growth for most countries in 1971. If average weather prevails, farm production can be expected to rise in response to more capital inputs used in most developing countries. The total agricultural outturn for the 3 developed countries, Japan, Australia, and New Zealand, is expected to be very close to the 1970 level. Gains in livestock production will be counterbalanced by Japan's program to divert land from rice and Australia's continued use of quotas to restrict wheat plantings.

A record value of farm product imports is forecast as diets continue to be diversified and upgraded, especially in the more prosperous countries and in large cities throughout the Far East. The total value of agricultural exports from the region is unlikely to change substantially in 1971.

Expansionary Economic Situation

Most countries of the Far East and Oceania shared in continued expansion throughout 1970. However, 1971 may see an intentional restriction to curb the inflationary side-effects of rapid gains. This is true particularly among the 3 developed nations, Japan, Australia, and New Zealand. Since agriculture plays a dominant role in almost all the developing nations, it continues to get top priority in economic planning for 1971.

Table 1 shows the predominant position of agriculture (including forestry and fishing) in the economies of selected countries. Comparative data was unavailable for some nations included in this report, since national accounting systems differ.

Developed Nations

Japan: The Japanese economy continued its rapid growth into 1971, though likely at a slightly reduced pace. The GNP in Japan has doubled since 1962, and increased 11.5 percent over 1969 to an estimated $157.1 billion (1965 prices).

Inflation, caused by a sustained rise in consumer spending and rising costs, is the most serious problem currently facing the economy. This, plus pressure to revalue the yen upward, prompted the government to take limited measures to slow industrial expansion in 1971.

Overproduction of rice continues to be the major agricultural problem in Japan. Japan will cut 500,000 hectares from rice production in 1971 following the 10-percent area reduction of 351,000 hectares imposed in 1970.

Australia: Despite a 4-percent drop in agricultural output during 1970, the general economy continued an upward trend. During the 1969/70 Australian financial year, ended June 30, 1970, the GNP reached $33.8 billion, 10.5 percent above 1968/69 at current prices. Real growth tallied 5.5 percent, and the same figure is now forecast for 1970/71. Prices rose by 5 percent in 1970, creating an inflation problem, and forcing the government to raise bond rates to 7 percent in mid-1970.

New Zealand: Growth in the GNP of 11.5 percent, predicted for the 1970/71 financial year, would be the greatest annual rate of economic expansion since 1950/51. Inflation, the largest in several years, accounts for over half of the increase. The government has instituted a temporary wage-price freeze while it attempts to reach agreement with industry on wage-fixing procedures and price justifications.

In the agricultural sector, export diversification will continue to receive top billing in 1971 to offset possible entry of the United Kingdom into the European Community.

Underdeveloped Nations

South Asia 1/: Moderate gains in economic growth were noted throughout South Asia in 1970.

Foodgrain output in India increased 5.8 percent, and industrial production by 6.6 percent, helping boost the national income 5.5 percent in real terms during the April 1969/March 1970 Indian fiscal year. A 5-percent growth rate is estimated for 1970/71,

1/ Ceylon, India, Pakistan.

Table 1.--Far East: Origin of Gross Domestic Product for Selected Countries

Item	DEVELOPED		UNDERDEVELOPED									
	Japan 1/	Australia 2/	India 2/	Pakistan 3/	Ceylon 4/	Burma 1/	Thailand 4/	So. Vietnam 2/	Malaysia 2/	Indonesia 1/	South Korea 3/	Taiwan 4/
	Percent of total GDP 5/											
Agriculture, Fishing and Forestry	9.8	8.5	53.1	46.3	34.8	34.3	31.9	35.1	30.9	51.7	28.6	23.0
Mining	0.7	2.2	1.0	0.3	0.5	0.7	1.9	0.4	5.5	4.1	1.2	1.7
Manufacturing	30.3	28.4	12.4	11.4	11.7	9.1	14.7	6.7	11.0	8.5	20.7	22.8
Construction	7.6	8.4	4.0	4.7	6.0	2.3	6.6	1.1	4.7	1.9	5.6	4.7
Transportation, Communication, and Utilities	8.3	11.9	4.6	7.5	10.1	7.2	7.3	4.7	6.2	3.7	7.8	8.4
Trade and Finance	27.6	17.9	12.1	14.0	17.0	30.0	21.2	14.7	16.7	15.9	19.2	16.0
Real Estate	6/	5.5	2.3	4.3	3.4	--	1.9	4.9	--	2.0	2.4	6.8
Public Administration and Defense	3.5	4.5	4.3	5.8	4.3	8.2	4.3	21.9	7.8	5.2	5.5	11.8
Other Services	12.1	12.6	6.1	5.6	12.1	8.2	10.2	8.3	17.2	6.9	9.1	5.7

1/ 1968 Data.
2/ 1967 Data.
3/ 1970 Provisional Est.
4/ 1969 Data.
5/ Gross Domestic Product = Gross national product plus factor income paid abroad less factor income received from abroad. Japan, India, and Philippines are Net Domestic Product. Totals may not add to 100 percent due to rounding.
6/ Real estate included with trade and finance.

Sources: Statistical Yearbook for Asia and the Far East - 1969 - United Nations, East Asia Economic Growth Trends - AID - January 1971, and national accounting publications from individual countries.

despite persistence of several economic troublespots. Labor unrest and rising prices are causing a deceleration in the industrial growth rate and a drop in exports. However, increased agricultural output in 1971 could make possible achievement of the 5-percent target.

Economic growth in Pakistan picked up modestly to 5.8 percent during 1969/70. The growth rate for agriculture doubled to 6.1 percent mostly because of increased wheat production in West Pakistan. A target GNP growth rate of 6.2 percent for 1970/71 may be overly optimistic in light of the generally troubled political situation and the 1970 flood disaster in East Pakistan.

Though actual data for Ceylon are unavailable, a 6-percent increase in GNP was forecast for 1970. This estimate compares with prior growth rates of 4 percent in 1969 and 6 percent in 1968.

Southeast Asia 2/: Steady performance was the general economic pattern throughout much of the region in 1970, except in South Vietnam, Cambodia and Laos. Economic output for the latter 2 nations is estimated to have dropped because of war conditions.

Devaluation of the piastre in October 1970 speared an attempt to shore up an inflation-ridden economy in South Vietnam. Continued uncertainty over the course of the war and the U.S. withdrawal make it virtually impossible to extrapolate any discernible economic growth pattern or to predict the prospects for 1971.

Thailand exhibited the second-fastest growth rate in Southeast Asia in 1969 of 9.4 percent, but is estimated to have dropped to a more moderate 7 percent in 1970. A worsening balance of trade continues to plague the economy of Burma, due chiefly to the slumping value of rice exports. The GNP in Burma for 1969/70 is estimated to have improved slightly, but a 9-percent increase in net national product since 1964/65 fell behind the 12 percent population increase during the same period.

Decline of the Philippine GNP growth rate from 6.2 percent in 1969 to an estimated 4.4 percent in 1970 is attributed to deceleration which followed the 1969 government economic shakedown. A steadying economy has resulted, but little if any acceleration in growth is expected in 1971. Credit restraints will remain in effect, and a year or so may be required before previous levels of economic growth can be reattained.

The economies of Malaysia and Singapore continue to press along at relatively high levels although 1970 GNP growth rate figures are not expected to exceed the levels of 8 and 14 percent, respectively, set in 1969. Both nations enjoy exceptionally favorable trade balances. The Malaysian government plans in 1971 to step up efforts to stimulate the economy by investing in the types of industrial projects which will create work and hopefully reduce the present 9 percent unemployment rate.

The most dramatic comeback in the Far East has been in Indonesia, where inflation through September 1970 was held to a 4.4 percent rate of increase. In the mid-1960's annual inflation rates as high as 85 percent occurred. Economic growth has continued to climb since 1968 when the first noticeable upsurge began. High priority will be given in 1971 to increasing rice production, since Indonesia's serious balance of payments problem was aggravated by the requirement for large rice imports in 1969 and 1970.

East Asia 3/: Impressive gains were registered for Hong Kong trade during the first 9 months of 1970 over the like period of 1969. Exports were up 21.6 percent,

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2/ Burma, Cambodia, Indonesia, Laos, Malaysia, Philippines, Singapore, Thailand, South Vietnam.

3/ Hong Kong, South Korea, Taiwan.

imports 21.1 percent and re-exports 8.8 percent. The stimulated export trade and rapid economic growth, however, caused prices to rise nearly 5 percent over the 1969 level. Hong Kong's economic future is threatened by Britain's possible entry into the European Community, and the possibility that Hong Kong may be classified as a developed country under the UNCTAD generalized preference scheme. This would bar it from proposed tariff preferences for underdeveloped countries.

Although the economic growth rate in South Korea dropped from 15.9 percent in 1969 to an estimated 9.7 percent in 1970, the economy shows signs of advances during 1971. Foreign debt was reduced in 1970 from $1.9 to $1.6 billion, but the economy remains heavily dependent on outside capital for industrial expansion.

Taiwan continues to exhibit one of the healthiest economies of the underdeveloped countries in the Far East. GNP in 1970 increased an estimated 10.1 percent over 1969. An increase in exports by 39.6 percent in 1970 allowed Taiwan to enjoy its first favorable trade balance since 1964.

Only agriculture failed to keep pace. A 4-percent growth in agricultural production reversed 1969's 1-percent decline, but fell short of the growth target by 2 percent.

Taiwan has one of the most diverse economies in the Far East. Except in Taiwan, Hong Kong, and Singapore, agriculture makes the largest contribution to the GNP's of the Far Eastern developing countries. Preliminary 1970 estimates place industrial production's share of Taiwan's GNP at about one-third, compared with only one-fifth for farming, forestry, and fisheries. (Lorin O. Lovfald)

Weather's Effect on Farm Production

Crop losses from adverse weather in the Far East and Oceania were about average during 1970, but several countries suffered devastating weather damage in 1970 and early 1971.

Pakistan: A catastrophic mid-November cyclone hit the coastal areas of East Pakistan. Many rice fields in the large Barisal district and in Noakhali were destroyed. Barisal leads in area planted to rice and is one of 3 largest producing districts. Further inland, the cyclone knocked rice to the ground just prior to harvest time. The rice deteriorated rapidly and grain which was salvaged kept poorly. Flooding in midsummer had already reduced the "aus" crop, harvested in September and October, one of 3 rice crops grown each year. The November cyclone destroyed some of the rice from this crop in the villages where it was stored.

Loss of paddy rice from the summer floods and November cyclones is estimated at slightly over 1 million tons, lowering East Pakistan's total production of rice 6 percent below previous estimates.

In addition there were substantial losses of livestock, jute, sugarcane, vegetables, peanuts, and several other important crops. However, the rice yield in areas not damaged by tidal waves was slightly higher than normal.

Winter rainfall in the wheat-growing area of West Pakistan was much below normal. Canal irrigation water has been in short supply in certain areas. A decline in yield for most spring-harvested crops is thus anticipated in West Pakistan in 1971.

Philippines: Three major typhoons struck the Philippines in October and November. The first 2, in October, were very damaging to crops. The third was less damaging to

agriculture, but caused the most overall destruction. Expected advances in output of rice, coconuts, copra and abaca were canceled. Vegetables and bananas grown for domestic consumption also were significantly damaged.

The loss of paddy rice caused by typhoons is estimated at 400,000 tons, about equal to the pre-typhoon expected increase in production. About 210,000 hectares of rice lands in 22 provinces were damaged or destroyed by the typhoons.

The combined loss of copra and coconut oil in copra equivalent amounted to 4 percent of the pre-typhoon production estimates, or 60,000 tons. The most severe damage to coconut trees was in the Bicol and southern Luzon areas, which produce 25 - 30 percent of total Philippine production.

The Bicol region also suffered the most damage to abaca. Typhoons caused Philippine abaca production to drop 20 percent below original forecasts. The loss amounted to 120,000 bales or 15,000 tons.

Australia: Widespread rains from September to December improved wheat crops in Queensland and Western Australia, which had been suffering from drought. Dry weather in northern New South Wales and parts of Queensland lowered the harvests of harder type wheats. Frost and rain damage at harvest decreased crop yields in Victoria and South Australia. Although production quotas will still be met and wheat exports will be maintained because of large carryover stocks, adverse weather resulted in very low yields in some localities.

Sorghum is a new crop for Australia. The 1970 sorghum crop was twice as large as in 1969, but production would have been much higher if it had not been for severe drought in Queensland and northern New South Wales. The area planted to sorghum in 1971 is expected to be much larger, as many farmers with reduced wheat acreage plant more sorghum and other summer grains. Rains from September to December enhance the prospects for the summer grain crops. Very heavy, but localized, rainfall in New South Wales in February resulted in substantial damage to the 1971 cotton crop.

South Vietnam: Widespread flooding was reported throughout most of Vietnam in October and November. About 40 percent (200,000 tons) of the rice crop in the 5 northern provinces was destroyed during October floods. Livestock, including water buffalo, beef cattle, pigs and chickens, were washed down the Danang river. The flooding climaxed nearly a month of steady rains followed by 2 typhoons and a tropical storm. Some flooding occurred in the northwest provinces of the Delta region, slightly reducing yields.

Thailand: October flooding throughout most of Thailand caused rice production estimates to decrease by 500,000 tons.

Afghanistan: Most cereal grain crops were reduced by about 15 percent in Afghanistan because of a severe drought at the beginning of the planting season in April.

West Malaysia: Flood damage from heavy monsoon rains in West Malaysia destroyed about 5 percent of the rice crop. Rains lasting the entire first week of 1971 blanketed nearly 90 percent of the country at the time when the main season wet paddy rice harvesting normally begins. The large rice-producing areas of Penang, Kedah and Perlis in the northwest were not affected by the rains. The states of Pahang, Trengganu and Kelantan, which normally produce 20 percent of the total rice crop, suffered damage in areas bordering rivers estimated at about 25,000 tons. Large estates reported only minor losses to rubber and oil palm trees. Loss of livestock was extensive in Malacca and Negri Sembilan.

Korea: Heavy rains in late October resulted in a 400,000-ton loss of paddy rice in South Korea.

Several countries merit consideration because they escaped abnormal weather during 1970. India had its fourth consecutive favorable summer monsoon, although several sections of the country experienced less than optimal weather. Poor timing of rains in Maharashtra reduced production of coarse grains and cotton below expectations, and heavy rains in West Bengal in July adversely affected the jute crop. Winter rainfall was subnormal in the major wheat areas. Flooding in southern Ceylon destroyed rice in storage but production was normal. Nepal had a bumper rice crop with excellent weather prevailing over the entire country. Above average rice yields were recorded in Japan, as no typhoon damage occurred. New Zealand's 1971 grain crops have been harvested under favorable weather conditions following a 1970 drought. Taiwan had a normal production year in 1970 after recovering from the typhoon damage of 1969. Indonesia also experienced a normal production year, although inadequate rainfall delayed planting of the main rice crop. (E. Wayne Denney)

Agricultural Production Continues Upward

Farm production continued to rise throughout the Far East during 1970 with few exceptions (table 2). An increase in output value of $537 million over 1969 yielded record total agricultural production of $27.7 billion, based on constant 1961-65 average on-farm prices prevailing in each country. This represents an increase of 2.0 percent for 13 Far East countries.

Farm production in the Oceania region decreased 0.5 percent. Australia's production gained fractionally; New Zealand's dropped 2.5 percent.

The Far East

The combined 2.0-percent growth rate in 1970 centered in South Asia where production rose 4.5 percent--mainly on the strength of a 5.3-percent increase in India. The magnitude of India's influence on regional shifts in production can be appreciated in view of its 38-percent contribution to total Far East output. Two-thirds of India's 1970 gain resulted from increases in cereals and peanut production. A 14.8 percent boost in copra production enabled Ceylon to grow at a 4.3-percent rate in 1970. Pakistan, despite a drop in rice production, managed to increase 1.6-percent overall. Rice declines in East Pakistan were compensated by a 9.2-percent climb in output of high-yielding West Pakistan wheat. Jute production, down as a result of floods in August and the cyclone disaster in November, further crippled prospects for an otherwise bright year in 1970.

Farm production in 7 Southeast Asia nations rose a healthy 4 percent in 1970. Gains were achieved in all countries with the exception of Cambodia. A 12.5-percent increase in rubber production allowed West Malaysia to become the single largest gainer in Southeast Asia. A return to near pre-war rice production levels in the Mekong Delta region enabled South Vietnam to record an increase of 5 percent over 1969. Rice production, constituting 83 percent of 1970 output, was one-fourth above the low 1968 level. The Philippines agricultural economy grew by 3.2 percent, chiefly because production of sugar, the nation's chief agricultural export, increased 18.9 percent. Corn, the second most important food crop in Southeast Asia, contributed heavily to production advances in Indonesia and Thailand. A record rice harvest (up 6 percent) boosted Burma's agricultural production.

The 1970 rice crop throughout Southeast Asia was up by 1.6 percent (table 3). Rice remains the backbone of the region's economy, contributing nearly one-half the

Table 2.--Agricultural production for selected countries of the Far East and Oceania, 1968-70

Region or Country	Production			Value 1/			Change from 1969 to 1970
	1968	1969	1970	1968	1969	1970	
	(1961-65=100)			Million U.S. dollars			Percent
South Asia	113	120	125	12,145.7	12,856.6	13,437.9	4.5
Ceylon	119	124	130	297.4	309.5	322.7	4.3
India	111	117	123	9,391.0	9,925.2	10,450.9	5.3
Pakistan	121	130	132	2,457.3	2,621.9	2,664.3	1.6
Southeast Asia	117	123	128	4,718.6	4,987.3	5,188.6	4.0
Burma	101	96	99	224.6	213.9	220.9	3.3
Cambodia	106	112	97	87.0	91.9	79.9	-13.1
Indonesia	116	116	120	1,614.1	1,610.4	1,659.9	3.1
Malaysia, West	139	157	173	689.1	780.4	859.2	10.1
Philippines	115	124	128	1,086.0	1,165.8	1,203.4	3.2
Thailand	121	133	137	823.0	907.0	936.5	3.3
Vietnam, South	84	94	99	194.8	217.9	228.8	5.0
East Asia	119	117	114	9,426.6	9,306.9	9,061.6	-2.6
Japan	119	114	111	7,394.0	7,115.1	6,887.9	-3.2
Korea, South	115	131	127	1,271.3	1,442.4	1,400.0	-2.9
Taiwan	127	125	129	761.3	749.4	773.7	3.2
Oceania	123	122	121	4,551.1	4,507.6	4,486.5	-0.5
Australia	125	123	123	3,380.2	3,305.7	3,314.4	0.3
New Zealand	116	119	116	1,170.9	1,201.9	1,172.1	-2.5

1/ Aggregate value using constant 1961-65 average prices received by farmers.

total value of agricultural output. Slight increases in rice were noted everywhere in Southeast Asia except in Cambodia, where war-related difficulties led to a decline of 14.3 percent.

East Asia experienced a mild decline in 1970 agricultural output--2.6 percent below 1969 levels. East Asia's production changes are weighted heavily by movements in Japan, which contributed three-fourths of the agricultural production. Japanese production was curtailed by one-tenth reduction in rice acreage, aimed at reducing a surplus. There were good gains in the fruit, livestock, and poultry industries. Adverse weather, however, held other cereal and vegetable production below normal levels. Rice and vegetable output also suffered in South Korea because of weather. Korea's barley harvest was down due to reduced acreage. Agricultural output in Taiwan recovered moderately from a brief reversal in 1969. Index of production rose 4 points or 3.2 percent, surpassing the previous high set in 1968. Meat production, up 10 percent, showed the most impressive gain.

Table 3.--Production of leading agricultural commodities in the Far East, average 1961-65, annual 1968-70

Region and Commodity	Production				Change
	Average 1961-65	1968	1969	1970	(1969 to 1970)
	1,000 metric tons				Percent
South Asia 1/					
Rice	70,119	81,132	83,665	86,330	3.2
Wheat	15,404	23,017	25,362	27,422	8.1
Sugarcane	127,714	121,867	154,061	165,129	7.2
Sorghum	9,073	10,066	10,004	10,792	7.9
Peanuts	5,030	4,631	5,144	6,000	16.6
Southeast Asia 2/					
Rice	43,709	49,235	52,164	53,132	1.6
Rubber	1,772	2,158	2,319	2,481	7.0
Corn	5,166	6,140	6,156	7,289	18.4
Sugarcane	29,002	31,498	33,072	37,235	12.6
Copra	3,023	3,049	2,882	3,023	4.9
East Asia 3/					
Rice	23,464	25,711	26,116	24,584	- 5.9
Vegetables	13,723	18,181	18,214	17,819	- 2.2
Meats	921	1,463	1,516	1,786	17.8
Fruit	4,359	7,170	6,779	7,262	7.1
Tobacco	223	284	254	228	-10.2
Oceania 4/					
Wool	1,065	1,216	1,255	1,280	2.0
Milk	12,702	13,325	14,208	13,698	- 3.6
Wheat	8,469	15,246	11,292	8,715	-22.8
Mutton & Lamb	1,070	1,247	1,337	1,316	- 1.6
Beef and Veal	1,220	1,279	1,404	1,470	4.7

1/ Ceylon, India, Pakistan. For peanuts, India only.
2/ Burma, Cambodia, Indonesia, Malaysia, Philippines, Thailand, South Vietnam.
3/ Japan, South Korea, Taiwan.
4/ Australia, New Zealand.

Oceania

Combined farm output for the 2 major Oceania producers, Australia and New Zealand, declined by 0.5 percent. Agricultural growth has been limited in part by a 2-year drought which moderated somewhat during 1970. Returns from beef and hog slaughter compensated for declines in crop production in the 2 countries, although declining dairy numbers dropped milk production 6 percent in New Zealand.

Livestock and related industries account for roughly 65 percent of total agricultural production in Australia and 93 percent in New Zealand. Australian wool output increased by 2.2 percent. Returns from beef and veal production expanded 4.7 percent, but mutton and lamb declined by 2.4 percent. New Zealand milk production is expected to fully recover in 1971. The increase is credited primarily to herd expansion following cutbacks during the drought. Dairying is New Zealand's largest agricultural enterprise.

Crop output in Australia and New Zealand declined mildly in 1970. Part of the loss resulted from self-imposed production controls. Quotas on wheat deliveries cut Australian wheat acreage by a fourth. Output of New Zealand wheat plunged 39 percent. Wheat accounted for about one-third of total crop production in Australia, and one-fifth in New Zealand in 1970. (Lorin O. Lovfald)

New Technology In The Agriculture of Developing Asia

Population in developing countries of Asia is growing by more than 2 percent annually, while cropland is expanding by less than 0.2 percent. Therefore, the additional farm products needed to feed the growing number of consumers and to expand and upgrade per capita consumption of foods and fibers must come largely from higher yields.

Programs to increase yields through use of high-yielding seeds, improved farming practices, and greater use of fertilizers and other capital inputs have in recent years been quite successful in some choice farming areas with fertile irrigated land. Yet about 700 million people in South and Southeast Asia farm non-irrigated lands for their livelihood. Net earnings have been boosted for farmers in choice areas and these farmers are investing much of their recent profits in additional inputs. The use of fertilizer, tractors, and irrigation pumps by farmers in India and Pakistan more than tripled in the last decade. Rapid expansion in use of inputs also has occurred in Southeast Asia, South Korea, and Taiwan.

Total imports of farm inputs by all developing countries of the Far East except communist countries range between $500 million and $650 million annually. Fertilizer imports increased from $125 million in 1964 to $335 million in 1968 but have since declined. Farm supplies and equipment receive high priority but the shortage of foreign exchange severely restricts the supply of tractors, irrigation equipment, and certain types of fertilizer. The United States was the leading supplier of fertilizer during the last decade, much of it made available under the foreign aid program.

Japan has become a major source of supply for farm inputs, and imports from Western Europe are rising. Imports of tractors through trade agreements with the USSR and Eastern Europe by South Asian countries have increased markedly in the last 3 years.

The completion of 3 large new fertilizer factories in India and a new factory in West Pakistan contributed substantially to the increased availability of fertilizer in those countries. A new factory is scheduled to soon begin producing nitrogenous fertilizer in Afghanistan, and Ceylon is planning its first fertilizer factory. South Vietnam has tentative plans for building a new urea plant near Saigon.

Indonesia expects to complete a giant fertilizer complex near Palembang, Sumatra by 1973. New fertilizer factories are scheduled for construction near Bangkok, Thailand. Wartime conditions have hampered prospects for operations of the new fertilizer factory at Kampot Son, Cambodia. The output of certain types of nitrogenous fertilizer in South Korea and Taiwan exceeds domestic farm needs, and some is now exported to other Asian countries.

Rice is the most important crop in Asia. New varieties have recently been developed in India, Ceylon, Burma and Thailand which farmers and consumers prefer over IR-8, the first major high-yielding variety distributed from the International Rice Research Institute (IRRI) in the Philippines. In West Pakistan, plantings of IR-6 have already surpassed those of IR-8. IR-5 has gained ground in India and South Vietnam. IR-20 and IR-22 were released in 1969 because of their greater consumer

acceptability and resistance to certain bacterial diseases. IR-20, planted on approximately 250,000 acres in East Pakistan in 1970, has also gained popularity in South Vietnam and the Philippines. Work to develop more suitable varieties, emphasizing consumer acceptability, continues at the IRRI.

The impact of new rice varieties upon production has been impressive despite considerable disease, insect and storage problems. Use of new high-yielding varieties varies widely from half of total rice production in West Pakistan, to one-third in South Vietnam, one-fourth in India, and almost none in Thailand.

Since the last major drought in 1967, wheat has been the bonanza crop of South Asia. Production increased from 18 million tons in 1967 to 30 million tons in 1970. Most of the gain is credited to success with new varieties and the package of inputs used with them. Nevertheless, farmers growing high-yielding varieties of wheat in India and Pakistan have used less than 60 percent of the recommended amounts of fertilizer. Deficiencies in phosphates, potash and some micro-nutrients have increased where the new wheat varieties are grown.

Gains in per capita availability of wheat in South Asia have been partially offset by declining per capita supplies of coarse grains and pulses.

Government-guaranteed incentive prices for wheat caused farmers in India and Pakistan to increase their purchases of inputs used with the new varieties in 1967/68. Rising fertilizer prices and other costs have since reduced profit margins, but profits have remained sufficiently high in India and Pakistan to create buoyant markets for tractors.

India: The use of new technology to increase yields has spread rapidly in irrigated wheat areas of the Gangetic Plain, but more slowly in coastal rice areas. Old methods of cultivation still prevail in most of the dryland areas of central India. During the last decade the use of fertilizer and tractors has more than tripled, but the area of cultivated cropland has increased plantings very moderatly.

Plantings of high-yielding varieties of cereals in 1970/71 reached the official target of 32 million acres. High-yielding varieties will account for about one-third of total cereal production in 1970/71, compared with only 7 percent in 1966/67. About a third of the wheat area was planted to high-yielding varieties this season, which will provide about two-thirds of the total wheat crop. Yields are about 4 times those for traditional varieties, partly because the new varieties are planted on the most fertile irrigated land. Fertilizer use on the improved varieties this season was about half the recommended quantity, but for traditional varieties it was less than 10 percent.

Three new varieties of wheat were recommended this eason for commercial use by the All-India Wheat Research Workers Workshop, after experiments with many varieties. Hira, a triple dwarf and rust resistant variety developed by the India Agricultural Research Institute, has an excellent quality amber-colored grain which is expected to appeal to consumers objecting to red varieties. Yields obtained from Hira in irrigated and fertilized fields of the Punjab, Haryana, and Uttar Pradesh ranged between 1.7 and 2.3 metric tons per acre during 1968-70, 14 to 23 percent higher than yields for Kalyansona, a popular new variety in these areas. Narbanda 4, a tall variety, and A 9-30-1, a durum wheat, are new varieties which should help dryland farmers to increase their yields.

Improved rice varieties have gradually become important, despite setbacks caused by disease problems and slow acceptance by farmers and consumers. In 1970/71, high-yielding varieties were planted on about 12 million of the 91 million acres of rice, and accounted for about one-fourth of the 42.5 million tons of milled rice produced. During the next few years, further gains in production are anticipated through expanded use of high-yielding varieties. Full implementation during the final year of the current 5-year plan could raise the output of milled rice to 50 million tons.

ADT-27, one of the first high-yielding varieties released by the Central Rice Research Institute at Cuttack, Orissa, is grown widely by farmers in Thanjavur District of Tamil Nadu. Jaya and Padma were favored new varieties in the Gangetic Plains in 1970. Yields for Jaya (Hindi for victory), in some plots were greater than those for IR-8 and the resistance to disease was much greater. Yields for Padma were less than those of IR-8 but the quality of rice was more acceptable to consumers.

New varieties of grain sorghums, millets, cotton, peanuts, and other oilseeds have been developed to increase yields in central India. "Swarna", a new variety of grain sorghum, gave impressive results in 1970.

India's fertilizer use climbed from 765,000 nutrient-tons in 1965/66 to a record 2.2 million nutrient-tons in 1970/71, about 10 percent above the 1969/70 level. Domestic supplies accounted for over 45 percent of the fertilizer used by farmers in 1970/71, compared with about one-third in 1967/68.

A 10-percent central government excise tax imposed on fertilizer sales in early 1969 plus higher state sales taxes and other taxes caused the prices of fertilizer to farmers to increase and the rate of purchases to slow down. Nevertheless, in 1970/71 prosperous farmers increased their applications of fertilizer for high-yielding varieties of cereals and did more multiple cropping. Cooperatives and branches of the nationalized banks provided more credit for farmers to buy fertilizer, but smaller farmers still found it difficult to obtain credit. Not more than one-fourth of India's 60 million farmers use any chemical fertilizer.

The current 5-year plan has a fertilizer-use target of 5.5 million nutrient-tons for 1973/74. Like other plans in the past, this target and the expectations of producing 129 million tons of foodgrains in 1973/74 appear to be overly optimistic. Fertilizer use is more likely to range between 3 and 4 million nutrient-tons by then. The use of fertilizer on foodgrains in 1970/71 was targeted at 2.7 million nutrient-tons, but actual use was 1.6 million nutrient-tons. Foodgrain production for 1970/71 was projected at 108 million tons, but the lag in fertilizer use held it down to about 103 million tons.

India's imports of manufactured fertilizer increased from 326,000 nutrient-tons in 1964/65 to a peak of 1.5 million nutrient-tons in 1967/68, when programs to expand plantings of high-yielding varieties proliferated. The United States supplied about two-fifths of fertilizer imports in the late 1960's. The value of fertilizer exports by the United States to India exceeded $100 million in 1967 and again in 1968, but remained below $60 million in each of the two following years. Most of these shipments were financed by USAID commodity loans payable in dollars. While India's imports of fertilizer from the United States and some West European suppliers have declined, shipments from Eastern Europe under trade agreements have increased. East Germany is a major source of imported potash, and Bulgaria has become an important source of nitrogenous fertilizer. The USSR ranks after the United States in exports of ammonium sulphate to India. Kuwait has become an important source of urea, manufactured from byproducts of new oil refineries. Imports of fertilizer from Japan peaked in 1967/68.

The output of nitrogenous fertilizer in India increased from 237,000 nutrient-tons in 1965/66 to 713,000 nutrient tons in 1969/70. The target for output in 1973/74 is 1.95 million tons, but a lag in the completion of new factories will probably hold production below the target. New factories are scheduled to begin producing urea (46 percent nitrogen) in 1971 at Kandla, Cochin, Madras and Namrup. The largest new factories for nitrogenous fertilizer are usually located near raw material sources, particularly petroleum refineries. The leading factories in terms of capacity for producing nitrogenous fertilizer in early 1971 were located at Kanpur, Baroda, Rourkela, Nagal, and Gorakhpur.

The output of phosphatic fertilizer increased from 118,000 nutrient-tons in 1965/66 to 224,700 nutrient-tons in 1969/70. The recent discovery of phosphate rock deposits in Rajasthan has improved prospects for the domestic manufacture of phosphate fertilizer.

The demand for 4-wheel farm tractors is booming, especially in wheat growing areas. Profits from high-yielding varieties of wheat have been excellent during the last 4 years, and more farmers are buying tractors with their increased earnings. Traditional wheat areas are turning increasingly to multiple cropping because of the success in growing varieties which mature in 110 to 120 days. The new practice of using tractors to quickly plow fields after the wheat is harvested in preparation for a crop of pulses or vegetables is spreading. Use of bullocks and other traditional methods of field preparation have limited the spread of multiple cropping. Potatoes and cauliflower have become favorite crops after the corn is harvested in September.

Indian farmers who used 100,000 tractors in 1970, are expected to purchase about 40,000 more this year. About 70 percent of the tractors are located within 250 miles of Delhi. Tractors are most numerous on farms where farm size ranges from 10 to 50 acres, and where most of the land is irrigated. Growing tractor numbers have influenced wage rates in northwestern India. Higher farm wages follow greater use of tractors in a district. Tractors and other inputs increase productivity and profits obtained by farmers and create a year-round cash income for farmers who can employ multiple-cropping. These results, coupled with the relatively low density of farm population, and a scarcity of labor during peak harvesting seasons, tend to raise farm wages.

Assembly plants in India and imports each will supply about half of the tractors distributed in 1971. Domestic output of tractors tripled between 1965 and 1970.

Pakistan: Success with high-yielding varieties of wheat and rice combined with expanded and improved irrigation facilities enabled West Pakistan to double cereals production between 1966 and 1970. High-yielding varieties were used on about half of the 15.5 million acres planted in wheat in 1970/71, but are likely to produce about four-fifths of total output.

West Pakistan's area planted to rice increased slightly from the 4 million acres in 1970, but production increased about 12 percent, to 2.7 million tons. High-yielding rice varieties accounted for about one-third of the planted area and for about half of total production in West Pakistan in 1970. Fertilizer use on irrigated rice also increased. West Pakistan's shipments of rice to East Pakistan increased from 178,000 tons in 1968/69 to 403,000 in 1969/70, and shipments during 1970/71 are estimated at 500,000 tons.

New technology desperately needed to lessen the mounting food import needs is not widespread enough to cause a breakthrough in crop production on the small farms of East Pakistan. High-yielding varieties were planted on only about 1.3 million of the 24.5 million acres of rice grown in East Pakistan in 1970/71, including 250,000 acres of IR-20, a promising new variety which has more resistance than IR-8 to some diseases that spread under warm, moist growing conditions. IR-6 has become a popular variety

in some areas of East Pakistan because it has greater resistance to Tungro and bacterial wilt diseases than has IR-8.

Floods in August and a devastating tidal wave in November reduced the rice crop in 1970/71 by about 7 percent. In consequence a crash program for higher yields will be launched for 1971/72 emphasizing spread of improved varieties of rice, expanded fertilizer use, and more multiple cropping.

Fertilizer use in Pakistan increased from 214,500 nutrient-tons in 1966/67 to about 440,000 nutrient-tons in 1969/70. Through 1969/70 the government subsidized sales of fertilizer at 35 percent of cost in West Pakistan and 57.5 percent in East Pakistan. Still, the West accounted for about 70 percent of the country's fertilizer consumption. The Agricultural Development Corporation took over fertilizer distribution in West Pakistan on August 1, 1970. Fertilizer use by wheat farmers during August-November 1970 was down sharply, apparently because of higher fertilizer prices and a shortage of water in irrigation canals.

Privately owned tube-wells in West Pakistan now number more than 75,000, providing irrigation water for about 2 million acres. The number of power pumps in East Pakistan is expected to reach 40,000 in 1975, compared with 18,000 in 1970.

Farmers in West Pakistan use over 43,000 4-wheel farm tractors compared with only 3,000 in East Pakistan. The use of pesticides to control insects which damage cotton is increasing in West Pakistan, and the control of pests in rice fields is expanding in East Pakistan. Lahore has become an important center for manufacturing tractors and insecticides. Pakistan's imports of insecticides from the United States exceeded $15 million in 1970.

The output of nitrogenous fertilizer in West Pakistan almost doubled in 1969/70 when a new factory near Karachi came into full production. New fertilizer factories at Lahore, West Pakistan and Ghorasal near Dacca, East Pakistan, are scheduled to begin producing nitrogenous fertilizer in 1971.

Pakistan is likely to import more agricultural inputs in the next few years. Imports of all agricultural inputs range between $50 million and $75 million annually, depending upon the timing of financial arrangements.

Afghanistan: High-yielding varieties accounted for about one-fifth of the 2.4 million tons of wheat harvested in Afghanistan in 1970. Fertilizer use has increased sharply: from about 9,000 nutrient-tons in 1967/68 to 14,000 tons in 1968/69, and 28,000 in 1970/71. Fertilizer is being used on grapes, rice, wheat, barley and corn. Tube-wells help some Afghan farmers to augment water supplies when rainfall is scant and when light snowpacks reduce the usual spring flow in irrigation canals. About 1,000 farm tractors are now in use in the country.

A new fertilizer factory near Mazar-i-Sharif is scheduled to begin producing urea this year. The factory, built by the Russians, has a capacity to produce about 100,00 tons of urea annually. Afghanistan's expanding natural gas output will provide raw material for the factory.

The United Kingdom and USSR have supplied most of the tractors currently in use in Afghanistan. Imports of farm tools, irrigation pumps, and insecticides are rising. Imports of fertilizer from the USSR have increased in the last 3 years. The United States shipped $512,000 worth of phosphate fertilizer to Afghanistan in 1969.

Eight new plants for grading and packing raisins have helped to improve the quality of the raisins exported. New methods of transporting fresh grapes in refrigerated trucks have enhanced exports to India and Pakistan.

Nepal: New technology has made a good beginning in the Terai and in Kathmandu Valley. Experiments have been conducted to find the best varieties of rice and wheat for selected locations. High-yielding varieties accounted for about one-fifth of the country's wheat production and one-tenth of the rice output in 1970. Wheat production in Kathmandu Valley has more than quadrupled since 1967 because of high yields obtained from Mexican varieties. The nation's total wheat production reached 227,000 tons in 1970, and some wheat was exported to India.

Rice production exceeded 2.5 million tons of paddy in 1970. High-yielding varieties, including Jaya and Padma, two new varieties from India, were planted on about 150,000 acres. Fertilizer use spread to new areas, including some areas where only traditional varieties of rice were planted. Imports of fertilizer from Japan, India, and Europe were up sharply in 1970. Imports of tractors and irrigation equipment also increased. Most of Nepal's surplus rice is sold in small lots across the border in India to merchants in Bihar, West Bengal, and Uttar Pradesh.

Ceylon: Hybrid varieties of rice have been unusually successful in Ceylon, where they account for about three-fourths of the entire rice output. H-7 has become the leading variety, surpassing the previous favorite, H-4. H-7 and H-4, developed in Ceylon, have not encountered the disease and the quality problems experienced by IR-8. Plantings of IR-20 are expected to become significant in the next few years, because it usually yields more than R-7.

Ceylon's imports of fertilizer exceed $20 million annually. Imports of other farm supplies are usually about half that level. The United States shipped $1.1 million of fertilizer to Ceylon in 1970 for use on rice and vegetables. Plans to construct a new fertilizer plant near Colombo await implementation.

Ceylon imported about 5,000 tractors in 1969 and again in 1970. Imports of small tractors from Japan have increased rapidly in the last 2 years.

Burma: About 319,000 acres of IR-8 and 36,000 acres of other IRRI varieties were planted in 1969/70. The performance of IR-8 in Burma has not been very impressive due to weather and disease problems. Programs to increase plantings in IR-20 are expected to become important in 1971.

The country has two new urea factories built with Japanese and West German technical assistance. They provided about two-thirds of the 94,000 nutrient-tons of fertilizer used in 1969/70. The government handles fertilizer distribution. The last stocks of phosphate fertilizer purchased from the United States in 1968 were used by farmers in 1970.

Mechanization has proceeded slowly in Burma. Less than 900 tractors annually were imported in 1969 and 1970. Most of them come from the United Kingdom, Japan, and the United States. Larger American tractors are often used to clear new land and construct irrigation projects.

Farmers used about 255,000 gallons of insecticides in 1969/70, more than 6 times the volume used during the previous season.

Thailand: The use of new technology has not spread as rapidly in Thailand as it has in some other Asian countries. As a surplus food producer with low rice prices, incentives for adopting new methods have not been sufficient. Fertilizer use increased from about 33,800 nutrient-tons in 1965/66 to 100,500 tons in 1967/68, and has since increased only moderately. In the last 5 years, the use of fertilizer for corn and vegetables has increased faster than for rice.

New varieties of IRRI rice have not spread rapidly in Thailand. The short-stemmed varieties can not be grown in the river flood-plain areas where traditional tall varieties of deepwater rice flourish. Bacterial diseases severely attack some of the IRRI varieties during the hot, moist monsoon, but seldom attack traditional Thai varieties. Consumers like the quality and cooking characteristics of traditional varieties and few will accept IR-8. Programs to expand fertilizer use and provide extension services in rice growing areas are planned, but to date they have not been widespread or effective.

Three new rice varieties, developed under the supervision of a private U.S. foundation, were accepted in 1969 and introduced to farmers in 1970. They are high-quality crosses between native and IR-8 strains, reported to be high-yielding and more resistant to native diseases than IR-8. Also, they are long grain varieties which consumers will accept.

About 35,000 4-wheel tractors and almost that many 2-wheel tractors are now in use on Thai farms. Two-wheel garden tractors are becoming popular with rice and vegetable growers near Bangkok. The use of irrigation equipment is expanding rapidly, especially in northern Thailand where cotton and tobacco are grown.

About 200 garden tractors were imported from Japan in 1970 and a larger number were assembled locally. Thai imports of more than 5,000 four-wheel tractors in 1970 were valued at over $10 million.

Laos: Programs to increase rice yields near Vientiane have included the use of imported inputs. Leading exports to Laos from the United States in the last 3 years have been tractors, insecticides and fertilizer. About 5,000 acres were planted to high-yielding rice varieties in 1970.

South Vietnam: The area planted to IR-8 and other high-yielding varieties of rice reached 1 million acres in 1970. Production of rice was up almost 10 percent. Higher prices since 1967 have enabled rice farmers to prosper and buy more inputs.

The use of fertilizer increased from 45,500 nutrient-tons in 1964/65 to about 170,000 tons in 1970/71. The demand for fertilizer has increased rapidly due to the expansion in the area planted in high-yielding varieties of rice with resultant higher incomes to rice farmers. Profits from vegetable crops produced for the growing urban population have also enhanced fertilizer sales.

All chemical fertilizer is currently imported, although a new plant to manufacture nitrogenous fertilizer is scheduled for construction in the next 2 years. Exports of fertilizer by the United States to South Vietnam increased from about $2 million in 1968 to about $15 million in 1970. Japan and Taiwan are also sending more fertilizer to Saigon.

Tractors are imported from the United States for land clearing and use in new irrigation projects. Japan shipped about 2,000 garden tractors and 1,500 4-wheel tractors to South Vietnam in 1970, almost triple the number shipped in 1969. Western Europe shipped over 1,000 tractors to South Vietnam in 1969 and again in 1970; the major suppliers were the United Kingdom, and France.

Indonesia: The area planted in high-yielding varieties increased sharply to about 1.8 million acres, or 9 percent of the total rice area. The improved varieties received larger quantities of fertilizer per acre than did traditional varieties and accounted for about one-fifth of total production.

Total fertilizer use in 1970 was more than double the 117,000 tons used in 1967. Fertilizer output remained relatively steady between 40,000 and 50,000 nutrient tons

annually in the late 1960's. The United States, Japan, and Western Europe provide most of the imported fertilizer. Imports are likely to decline after 1973 when expanded facilities to produce nitrogenous fertilizer near Palembang are completed.

Indonesia imports about 3,000 farm tractors annually from Europe and Japan. Imports of irrigation equipment from Western Europe exceed $5 million annually, and imports of insecticides from the Netherlands and Switzerland combined exceed $6 million annually.

Malaysia: The area planted in high-yielding varieties of rice in West Malaysia rose from 104,450 acres in 1966/67 to 316,000 in 1969/70, and increased by 20 percent in 1970/71. New fields developed through land reclamation in northeast Malaya were planted to IR-8 and IR-20.

Improved methods and high-yielding varieties of rubber and palm oil trees enabled plantation agriculture to prosper despite declining prices. During 1970-75 an additional 25,000 acres of high-yielding strains of rubber trees will be planted.

Fertilizer use increased sharply in 1967 and remained about 77,000 nutrient-tons in both 1968 and 1969. Incentives to increase fertilizer use by rice farmers were dampened by lower rice prices. Consumers preferred imported Thai rice even when larger supplies of Kedah or local rice became available at subsidized prices.

Malaysia imported about 3,000 farm tractors in 1969. About two-thirds came from the United Kingdom; Japan and the United States supplied most of the rest. Imports of tractors in 1970 were at about the same level as in 1969.

Singapore: The use of fertilizer by gardeners increased markedly in 1969 and 1970. Total fertilizer use increased from 6,500 nutrient-tons in 1967/68 to 35,000 nutrient-tons in 1968/69. Singapore is an important transit trade center for fertilizer mixtures, small tractors, rotary tillers, used farm equipment, tools, and pesticides. The United States and Japan supply most of the growing imports of fertilizer. Burma and Indonesia are important customers for farm supply distributors in Singapore. Tractor imports range between 600 and 900 annually, mostly from the United Kingdom, Japan, and the United States.

Philippines: The International Rice Research Institute at Los Banos has provided the Philippines with a spectrum of techniques for increasing rice production. High-yielding varieties were planted on about 3.2 million of the 7.7 million acres of rice grown in 1969/70, and accounted for about 70 percent of the 5.2 million-ton crop. New varieties yielded over three-fourths of the crop in 1970/71. A switch from IR-8 to IR-20 and IR-22 has occurred as growers seek to produce varieties more pleasing to consumers.

Corn production increased by 17 percent in 1969/70 to 2 million tons, partly because of greater use of improved varieties and fertilizer. Anticipated gains in 1970/71 were hampered by adverse weather, and additional efforts to boost yields are likely to be made in the coming year.

Taiwan: Total fertilizer use in Taiwan in 1970 was approximately 300,000 nutrient-tons. Fertilizer use was already at a high level in the mid-1960's and gains in recent years have not been as striking as those found in less developed countries. Multiple-cropping is so common that the average farmer harvests 2 crops per year. Some farmers receive more than 4 crops per year by growing short-duration vegetable crops.

The level of technology for controlling insects and diseases has reached high levels, especially for controlling pests which attack horticultural crops. Small tractors, of 12 to 28 horsepower, are being used by more farmers. The use of two-wheel garden tractors and rotary tillers has become common in rural areas.

South Korea: South Korea's output of nitrogenous fertilizer zoomed from 81,000 nutrient tons in 1966/67 to 315,000 tons in 1968/69 and moved to higher levels in 1970/71. Imports of nitrogenous fertilizer reached a peak of 175,000 tons in 1966/67 and have declined moderately since. The output of phosphate fertilizers jumped from 6,300 tons in 1967/68 to 27,600 tons in 1968/69. Total fertilizer use currently exceeds 600,000 nutrient-tons, double the level recorded in 1965.

Rice production in 1970 reached a record 4 million tons (milled basis) through greater use of new varieties and fertilizer. Experimental plantings of IR-667, a cross between IR-8, Yakara and TN-1, were made throughout the country in 1970 and over 2,000 hectares of this variety will be planted in 1971. Over 2,000 garden tractors were imported from Japan in 1970. (John B. Parker, Jr.)

South Vietnam's New Land-to-the-Tiller Program

South Vietnam's new land-to-the-tiller law was enacted on March 26, 1970, and implementation was begun late in the year. The purpose is to enable farmers to receive all of the benefits from their labor. The law specifies that this purpose will be accomplished by providing the cultivators with ownership rights, a concept that is not new to the Vietnamese.

Land Tenure in Vietnamese History

Until 1955, North and South Vietman were unified. The Vietnamese have been predominantly a nation of lowland rice farmers for more than 2,000 years. They have developed deep cultural attachment to their ancestral lands and villages. However, land redistributions have followed political upheavals in Vietnam throughout the centuries. Confiscated land usually has been given to the villages as communal land.

Communal lands were administered in the villages by a council of elders and distributed periodically in equal portions to all male members 18 years or older so that every family in the community would have a portion. In addition to these communal plots, the village held special rice fields for communal celebrations, and for the benefit of orphans and widows. Interfamily labor teams worked in each other's fields and the communal fields.

In addition to their communal portion, Vietnamese families held family patrimony. Vietnamese customs insured the perpetuity of this landed patrimony. Property could be leased and crops harvested from the property could be pledged on loans, but the patrimony belonged to the ancestors and decendents of the peasant's family, and could not be sold.

In the late nineteenth century the French completed their conquest of Vietnam and established political control throughout the country. The conquerors, favoring large estates and concentration of property, gave out large concessions of hundreds, even thousands, of acres to individuals. They did not enforce traditional laws or even understand traditional property rights; their policies favored western, individualist, property rights. When the French created a land market, there was tremendous social disruption. Both the patrimony and the communal landholding systems gave way to large landholding with peasant tenancy.

Japan controlled Vietnam during World War II. When the Japanese left after the war, the nationalist communist resistance (Viet Minh) attempted to rule the country. They distributed the land left by fleeing landlords among the peasant cultivators. The Viet Minh were opposed by the French, and after many years of fighting, a treaty was signed in Geneva in 1955 dividing the country into 2 Vietnams.

Land Tenure and Land Reform Programs since 1955 in South Vietnam

The conditions in South Vietnam after the Geneva Accords fit the sterotype of a peasant economy fairly well. Statistics vary somewhat, but most scholars agree that less than 2 percent of the population owned nearly half the land and that nearly 85% of the peasant families were tenants.

The Viet Minh administrators had governed large parts of South Vietnam for as much as 10 years during the fighting. South Vietnam, under the Diem regime, took political control of the countryside; the landlords were allowed to reclaim land distributed by the Viet Minh and land that was temporarily out of cultivation because of the war. The landlords re-established their right to collect rents and some demanded payment of back-rents.

Both the South Vietnamese government and National Liberation Front (NLF) have offered programs to cope with the land tenure problem. The government's reforms before the Land-to-the-Tiller law largely consisted of a rent reduction program and a redistribution program. The latter program included redistribution of the largest holdings (over 100 hectares).

From 1958 until 1968 the government distributed 250,000 hectares, to less than 10 percent of tenant households. Rent contracts were signed by about half of the tenant farmers. These contracts were not widely enforced and most were allowed to lapse.

The National Liberation Front claims to have distributed most of the arable land it has controlled. The peasants were freed from rent obligations and often were also freed from payments to moneylenders.

For the land rent system, the NLF has substituted a tax structure which supports the social, economic development, and military programs. There are four tax brackets for Vietnamese farmers which require them to pay from nothing to 21 percent of their crop yield. In the early 1960's, for example, this schedule exempted farmers who raised less than 15 bushels of rice, charged the poor farmer (variously defined) 5-10 percent, the middle-class farmer 10-15 percent, and the rich farmer and absentee landlord 15-21 percent.

The New Program in Detail

The Land-to-the-Tiller law outlines the government's much wider land distribution plan. The amount that a self-cultivating landlord is allowed to retain is 15 hectares plus 5 hectares of land cultivated for worship (memorial) purposes. Land above this amount is to be distributed to tenant farmers.

All non-agricultural land and some categories of agricultural land are excluded from coverage of the law. Farmlands excluded from redistribution are those in coffee, rubber, sugarcane, tobacco, tea, cotton, jute, indigo, rush, coconut, mulberry, vegetables, orchards, and pastures. Rice land and secondary croplands growing sweet-potatoes, corn, sorghum, manioc, peanuts, soybeans, green beans, red beans, white

beans and sesame are included. Land owned by religious organizations is excluded as is land cleared after the law took effect.

Landlords are to receive compensation for the land which is expropriated. The compensation payment is supposed to equal 2 1/2 times the average annual crop yield of the last 5 years. One-fifth of the compensation is to be paid in cash when the land is taken. The rest of the compensation is to be paid in land bonds redeemable in 8 equal installments over an 8-year period bearing 10 percent interest and guaranteed by the government.

Provision is made in the law for compensation to various individuals who hold rights to the same plot of ground. The bundle of rights we call ownership has traditionally devolved upon various families, organizations, and governments in Vietnam. The law makes provision for problems which may occur when one family holds a lease on the plot and another owns it. In this case the compensation to each holder of rights is to be determined by special committee.

The distribution of land is to be free to each farm family. The maximum area distributed is to be 3 hectares in Southern Vietnam (in the Mekong Delta area where plots are larger) and 1 hectare in central Vietnam where double-cropping frequently is practiced.

The present tenant tillers have the first priority on plots to be redistributed. Second in line are the parents and spouse or children of war dead, next are soldiers and civil servants who have abandoned cultivation because of the war. Last in order of priority are farm laborers.

Persons receiving land distributed under the law cannot transfer ownership for a period of 15 years, except in the case of prior official authorization. The new owner must directly cultivate his land.

The program is very similar to land distributions previously carried out in Taiwan and South Korea with U.S. assistance, and also is somewhat similar to the Japanese reform. The landlord's retention limits are closer to those used in the Taiwan, Korea, and Japan than to previous Vietnamese redistribution programs. The effects of the reform, if fully implemented, are therefore expected to resemble these other cases.

A separate program is being developed to deal with the Montagnards. This program is supposed to occur in 2 stages. First, identification of the village is made. Second, individual title issuance and plot identification is to take place. If these programs are carried out, the agricultural production processes and tenure systems of the Montagnards will be radically transformed. Many of the tribes practice slash and burn agriculture. An area is farmed for 2 or 3 years then abandoned and another area is slashed and burned and prepared for cultivation. The proposed program would contribute to stabilization of tenures on low-fertility soil. Also radically changed would be the very significant rights over land held by the community among the Montagnard tribes.

Implementation

The land reform policy of South Vietnam underwent a major change starting in 1968. In the early years of land policy in the 1960's, approximately 450,000 hectares of land were expropriated from landlords but only 250,000 hectares were redistributed. In addition to the 200,000 hectares not distributed, the government acquired 228,000 hectares of land from France (formerly owned by Frenchmen) and also held 265,000

hectares of public domain land which had been settled by peasants. Distribution of this land was accelerated beginning in 1968 as shown in the tabulation below.

DISTRIBUTION OF EXPROPRIATED AND FORMER FRENCH LAND

Year	Hectares Distributed
1966	4,812
1967	8,085
1968	24,039
1969	74,709
1970 (through November)	45,106

Various changes in regulations also indicate the changed policy toward land reform. In November 1968 the government prohibited officials or soldiers from re-installing landlords or helping collect rents in newly secured villages. In February 1969, a rent freeze was declared in newly secured villages and in April this freeze was extended to the whole nation. The freeze in newly secured areas has the effect of legalizing the Viet Cong's land tenure changes. In July 1969 it was decreed that tenants receiving distributed land would no longer pay for the land.

Approximately 1 million hectares of land are to be distributed in the Land-to-the-Tiller program. The distribution is projected to take at least 3 years and will affect over 600,000 of the 1.2 million families who rent land. As of October 1970, there had been 713,641 hectares registered as subject to the distribution provisions of the law and 523,381 hectares had been registered for exemption from expropriation. Cumulative through January 15, 1971, about 88,000 hectares of land had been approved for distribution.

Productivity Increases Resulting from Land Reform

Producivity implications of the program cannot be based on experience because the last distribution program was not fully implemented and was limited in scope. Some possible effects can be sketched, however, from similar reforms elsewhere and the general structure of the reform.

Since the farm production unit will not, in most cases, be changed by the reform, short-run change in output resulting from the reform will be fairly small. Landlords in most of South Vietnam do not traditionally supply any factors of production other than land. The tenants are accustomed to supplying labor, seeds, and implements in the necessary combinations for production of rice and they will most likely continue to do so. The only change will be that returns will accrue to the tillers, rather than their respective landlords. Size of plots, if below the maximum (most are), will also not be changed by the reform.

Those funds which were formerly spent on rents could be mobilized for investment and longrun productivity gains in several ways. First, if adequate extension services are available to teach modern techniques, modern inputs such as new seeds and fertilizer may be purchased in greater quantities. Second, large increases in productivity could be accomplished through better water control in Vietnam. These projects would

have to be handled by villages or regions. Greater taxation of a part of the surplus which formerly went to rents could provide funds for these projects. Third, with greater income, the people of Vietnam could improve their general standard of living, which would include better health and education and eventually better labor productivity. Obviously, all of these alternatives would involve programs outside of the land reform itself. This is why land reform is often considered a precondition and not a complete plan for development.

Land reforms throughout Asia have been followed by increases in agricultural production. The extent to which this increase is attributable to land reform, and the extent attributable to other factors is very difficult to determine. However, land reforms have certainly not decreased production, and combined with the proper supplementary programs, have launched large increases in agricultural production in some countries. (Nancy Hancock)

U.S. Agricultural Trade With The Far East

Exports

U.S. exports of all commodities to the Far East in 1970 advanced to $8.7 billion, an increase of $1.7 billion from the previous year. Farm product exports reached a record of $2.5 billion, compared with $2.0 billion in 1969 (table 4). Japan accounted for nearly half of the Far East total. Shipments of U.S. agricultural products to all foreign destinations reached $7.2 billion, up one-fifth from the 1969 level.

Among the most important items shipped to the Far East were wheat and wheat flour, corn, grain sorghum, rice, soybeans and soybean oil, cotton, tobacco, and nonfat dry milk (table 5). Other items of importance include cattle hides, tallow, variety meats, and fruits. Leading markets in order of importance in 1970 were Japan, India, South Korea, South Vietnam, Indonesia, Taiwan, Pakistan, the Philippines, and Hong Kong. Japan, Hong Kong, Taiwan, and the Philippines were the leading dollar markets. Most shipments to India, Pakistan, Indonesia, Vietnam, and Korea were financed under P.L. 480.

Exports of agricultural items to Japan reached a record of $1.2 billion in 1970, compared with $934 million in 1969. Exports of soybeans to this market increased by two-fifths. There were also impressive gains in shipments to Japan of feed grains, cotton, wheat, tobacco, pork, lemons, soybean oil, alfalfa meal and pellets, and feather meal.

Agricultural exports to Pakistan rebounded in 1970, rising to $119 million. This tripled the unusually low value recorded in 1969, when Pakistan's imports of wheat fell to a 10-year low. Exports of U.S. wheat to this market jumped from 200,000 tons in 1969 to 1.2 million tons in 1970; exports of soybean oil climbed by 71 percent to a record 142,000 tons. The demand for imported wheat and rice in East Pakistan is rising sharply due to rapid population growth, increased urbanization, and slow gains in rice production.

Agricultural exports to South Vietnam, Taiwan, and Indonesia recorded substantial increases. Vietnam took more rice, wheat, nonfat dry milk and feed grains. Taiwan received more wheat, soybeans, feed grains, soybeal oil, and tobacco. Indonesia has been a growing outlet for wheat flour, rice, and cotton on concessional terms. Shipments to Singapore increased by 55 percent to $17 million while exports to Malaysia increased by 10 percent to $15 million. Exports to the Philippines and Thailand were virtually unchanged from 1969.

Table 4.--United States: Agricultural trade with the Far East, 1969 and 1970.

Country	Exports		Imports	
	1969	1970	1969	1970
	Million dollars		Million dollars	
South Asia				
Afghanistan	2.6	0.7	1.3	0.3
India	261.7	256.3	69.4	78.1
Pakistan	38.5	119.1	8.6	6.3
Nepal	0.1	0.1	0.7	1.1
Ceylon	13.5	6.5	26.2	24.0
Southeast Asia				
Burma	0.4	0.6	--	0.1
Thailand	32.1	31.9	26.3	26.7
Vietnam, South	132.1	166.4	0.2	0.1
Laos	0.5	1.9	0.1	0.1
Cambodia	0.3	--	2.4	1.1
Malaysia	13.5	14.9	146.2	123.8
Singapore	11.0	17.1	20.8	17.6
Indonesia	95.7	131.2	127.1	122.2
Philippines	78.3	77.6	285.3	358.6
East Asia				
Korea, South	234.9	218.0	7.9	4.9
Hong Kong	54.6	57.2	3.3	3.4
Taiwan	107.1	134.4	42.3	50.5
Japan	933.5	1,214.1	37.3	37.1
Ryukyu Is.	20.5	18.3	--	--
Other	0.1	0.3	0.1	0.1
Total Far East (Agricultural)	2,031.0	2,466.6	805.5	856.2
Total World (Agricultural)	5,936.2	7,174.0	4,957.9	5,142.8
Percentage Far East of World	33	34	16	17
Total Far East (All Commodities)	6,930.5	8,664.1	7,842.5	9,276.8
Percentage, Agri. of All Commod.	29	28	10	9

Note: Dash (--) indicates none or negligible

Source: Data from U.S. Bureau of the Census

Table 5.--United States: Exports of selected agricultural commodities to the Far East, calendar year 1970

Country	Wheat	Wheat flour	Rice	Feed Grains 1/	Tobacco	Soybeans	Soybean oil	Cotton 2/	Non fat dry milk
	1,000 metric tons								
South Asia									
Afghanistan	3	--	--	--	--	--	--	--	1
India	2,322	1	--	23	--	--	114	238	8
Pakistan	1,151	--	--	8	--	--	142	8	3
Nepal	--	--	--	--	--	--	--	--	--
Ceylon	--	57	--	--	--	--	1	--	1
Southeast Asia									
Burma	--	--	--	--	--	--	--	--	--
Thailand	12	2	--	--	9	--	--	72	2
Vietnam, South	90	123	521	89	5	--	4	115	17
Laos	--	1	--	--	--	--	--	--	--
Cambodia	--	--	--	--	--	--	1	--	--
Malaysia	8	2	--	--	4	--	1	9	2
Singapore	16	3	--	5	1	47	--	4	--
Indonesia	--	351	366	1	--	--	--	247	5
Philippines	621	11	--	1	3	--	--	151	9
East Asia									
Korea, South	1,236	75	243	300	--	55	1	478	11
Hong Kong	60	3	14	--	2	1	5	66	1
Taiwan	583	--	--	31	4	584	6	191	--
Japan	2,759	--	--	6,695	27	2,961	5	713	--
Ryukyu Is.	40	5	34	--	--	3	2	1	1
Other	--	--	--	--	--	--	--	1	--
Total Far East	8,901	633	1,178	7,153	56	3,651	284	2,294	62
Total World	17,432	1,182	1,744	19,634	231	11,770	1,181	2,981	189
Percentage, Far East of World	51	54	68	36	24	31	24	77	33

1/ Barley, Corn and Sorghum
2/ 1,000 Running Bales

Note: A dash (--) indicates none or negligible.
Source: Data from U.S. Bureau of the Census.

Shipments to India and Ceylon were lower in 1970. Exports of wheat to India gradually declined from a peak of 6 million tons in 1966 to 2.3 million in 1970. Exports of soybean oil and tallow to India have increased appreciably. Agricultural exports to Ceylon declined from a peak of $19 million in 1968 to $14 million in 1969 and only $7 million in 1970, mostly because of a decline in deliveries of wheat flour. Exports to South Korea were down slightly in 1970 but were expected to rise in 1971.

There was a sharp rise in U.S. cotton exports in 1970 to the Far East (mostly increased dollar sales) to $275 million. This compares with $206 million in 1969. Exports increased from 1.8 million bales in 1969 to 2.3 million bales in 1970. Japan, South Korea, Indonesia, the Philippines, and India showed the largest gains. Hong Kong was the only country that showed a serious loss. Shipments to that destination tumbled from $18 million in 1969 to $7 million in 1970.

U.S. agricultural exports to the region are likely to reach a new high in 1971, with more food grains shipped to Indonesia, Taiwan, South Korea, Afghanistan and Pakistan, and more wheat, feed grains, alfalfa meal, and fruits sold to Japan. Grain shipments to South Vietnam and India probably will decline. Cotton exports to Taiwan, South Korea, India, Indonesia, and the Philippines may increase. Larger shipments of soybeans, soybean oil, tallow, corn, mixed feeds, tobacco, dairy products and processed foods to the region are expected.

Imports

The United States is an important market for the products of the Far East. U.S. imports of all commodities from the Far East were up 18 percent to $9.3 billion in 1970. Agricultural commodity imports totaled $856 million, up 6 percent from 1969. Southeast Asian countries supplied about three-fourths of all farm commodity imports. The principal agricultural imports from the region were sugar, rubber, tea, spices, fruits and vegetables, cashew nuts, and coconut products.

Agricultural imports from the Philippines, the leading Far East source of U.S. farm product imports, rose by 25 percent in 1970 to $359 million. Sugar and coconut products were the leading items. Malaysia and Indonesia follow the Philippines in importance. Rubber was the leading import item from both countries.

Sugar and rubber are the two leading agricultural imports from the Far East. In 1970 the region supplied over one-fourth of the $729 million of sugar imported by the United States. The Philippines, Taiwan and India combined supplied the U.S. with 1.4 million tons in 1970. Sugar imports from the Philippines, the major Far East supplier, rose sharply to 1.3 million tons, one-third above the 1969 level. Taiwan provided 76,400 tons, up 7 percent from 1969. Imports from India declined to 45,100 tons, from 58,700 tons in 1969.

In 1970 the region supplied about four-fifths of the $237 million of rubber imported by the United States. Imports from Malaysia, the leading source, decreased by 5 percent to 249,000 tons, compared with 273,000 tons in 1969. Imports from Indonesia, Thailand, and Singapore also declined. Imports from Ceylon were 8,400 tons in 1970 compared with 8,000 tons in 1969.

Fruits and vegetables ranked third in importance of agricultural imports from the Far East in 1970. Principal items were canned pineapples, canned mandarin oranges, and canned mushrooms. Other items include desiccated coconut, pineapple juice, and dried mushrooms. Taiwan was the principal supplier; the Philippines and Japan followed.

Ceylon and India supplied two-thirds of all tea imported in 1970. Indonesia and India were the principal sources of spices. Cashew nuts and walnuts are supplied by India. (Charles E. Goode)

The Japanese Market for U.S. Agricultural Products

Japan's economy continued steady growth in 1970. Foreign trade expanded appreciably with a record high for both exports and imports. Foreign exchange reserves more than doubled between the end of 1967 and the end of 1970.

Importance of the United States in Japan's Trade

The United States was Japan's largest foreign market in 1970. Total exports were valued at $19 billion as compared with $16 billion in 1969. Of this trade, exports to the United States accounted for about $6 billion as compared with $5 billion in 1969. The major commodities involved were motor vehicles, steel, and synthetic textiles. U.S. imports of agricultural products from Japan amounted to $37 million, down 1 percent from 1969.

Japan's total imports from all sources were valued at $18.9 billion in 1970, an increase of about 25 percent over the $15 billion trade of 1969. Imports from the United States amounted to $5.6 billion, compared with $4 billion in 1969. Most of the $1.6 billion in increased imports in 1970 occurred in agricultural commodities, industrial materials, and capital goods.

Japan's imports of U.S. agricultural commodities in 1970 accounted for 25 percent of total imports of all commodities from the United States, compared with 23 percent in 1969.

General Agricultural Trade Situation

Japan's imports of foodstuffs and agricultural raw materials from all countries increased in recent years from a total value of $3.4 billion in 1968 to about $4 billion in 1970. Imports from the United States comprised 30 percent of the total from all sources (Table 6). There were substantial increases in the imports of meats, wheat, feed grains, fruit items (with the exception of raisins), pulses, sugar, soybeans, other oilseeds, oilcake and meal and tallow. Raw material imports, such as rubber and wool, were down in trade values in 1970, which reflected lower prices for these commodities rather than volume declines.

United States as a Supplier of Farm Products

The value of U.S. exports of agricultural commodities to Japan rose to a record $1.2 billion in calendar year 1970--30 percent above 1969 (table 7). This trade represented a 110 percent increase over the average value of U.S. agricultural exports to this market during the 1965-69 period. U.S. agricultural exports in 1970 accounted for 26 percent of the total value of exports of all commodities as compared with an average of 34 percent for the 1965-69 period.

Individual U.S. farm exports to Japan in 1970 that showed significant increases in value were: wheat, 30 percent; corn, 23 percent, sorghum, 34 percent and soybeans, 52 percent. Ten commodities accounted for about 90 percent of the total value of U.S. farm exports to Japan in 1970, these were:

Wheat: Japan's imports of wheat totaled 4.7 million tons, valued at $318 million. The United States, the principal source, supplied 2.6 million tons, valued at $174 million. Canada was second, suppling 1.2 million tons; Australia, third, supplied 900,000 tons. Prospects for U.S. wheat in the Japanese market continue favorable in 1971, with Japanese imports of U.S. wheat forecast at about 2.7 million tons for 1970/71.

Feed grains: The U.S. share of the Japanese corn market amounted to 4.4 million tons in 1970 valued at $293 million, or about 70 percent of the market. Other principal suppliers were Thailand with 536,000 tons and Argentina, 447,000 tons. By late 1970, sorghum was being substituted for corn in mixed feeds to offset higher prices for corn. In 1971, 500,000 tons of Japanese rice will be allocated to mixed feeds. Early

Table 6.--Japan: Total imports and imports from the United States of selected agricultural commodities

Commodity	Total imports			Imports from the United States		
	1968	1969	1970	1968	1969	1970
	Million dollars					
Beef & Veal, fresh and frozen	13	16	22	(1)	(1)	.1
Mutton & lamb, fresh and frozen	41	47	50	-	-	-
Poultry meat, fresh and frozen	11	15	8	11	7	4
Nonfat dry milk	18	12	12	2	1	.4
Wheat	289	297	318	144	133	174
Rice	50	9	2	(1)	(1)	.3
Barley	38	34	5	1	1	-
Corn	308	332	407	154	207	293
Grain sorghum	136	159	231	110	108	134
Lemons & limes	15	19	24	15	19	24
Bananas	101	116	144	-	-	-
Almonds	6	5	6	6	5	6
Pineapples, fresh	3	4	6	.2	.1	.1
Raisins	7	7	7	6	7	7
Pulses	21	30	53	2	5	6
Sugar	145	194	280	-	-	-
Wheat bran	15	14	17	3	2	1
Alfalfa meal	19	9	5	19	9	2
Oilseed cake	13	16	31	5	5	2
Lard	9	10	6	8	7	5
Tobacco	51	66	66	34	49	45
Hides and skins	70	102	98	47	102	65
Soybeans	274	281	366	228	281	330
Oilseeds, other	145	134	170	7	4	8
Natural rubber	52	142	129	.3	.1	.2
Wool	361	370	323	-	-	-
Cotton, raw	502	414	461	124	59	77
Tallow, beef	35	44	53	30	32	39
Total, selected items	2,748	2,898	3,300	956.5	1,043.2	1,223.1
Total, all agricultural imports	3,387	3,661	4,100	-	-	-
Selected items' portion of total	81	79	80	-	-	-
U.S. portion of total	-	-	-	28.2	28.4	29.8

(1) Negligible

Table 7.--United States: Exports of selected agricultural products to Japan, value and quantity, 1965 - 1970

Year	Total	Wheat	Corn	Sorghum	Lemons	Tobacco	Cattle hides 1/	Soybeans	Cotton 2/	Tallow inedible	Feather Meal	Alfalfa Meal	Other
							Million dollars						
1965	876.2	109.1	137.5	70.1	4.6	35.1	25.6	153.0	122.5	34.3	5.5	12.5	166.4
1966	942.1	138.2	122.4	104.1	5.8	39.7	42.9	207.5	109.4	35.1	3.6	15.8	117.6
1967	865.0	140.8	91.7	119.3	7.1	24.5	37.8	177.4	114.8	33.9	3.3	14.2	200.2
1968	932.6	123.8	144.8	94.8	8.8	45.7	40.8	218.0	110.0	29.7	4.2	16.5	95.5
1969	933.5	119.3	190.6	87.0	11.4	44.6	50.3	200.3	52.2	29.5	4.5	19.2	124.6
1970	1,214.1	157.5	235.1	129.4	13.1	61.3	49.7	305.3	86.1	32.2	5.9	23.6	114.9
							1,000 metric tons						
1965	n.a.	1,864	2,413	1,442	20	17	3,632	1,425	1,015	180	44	249	n.a.
1966	n.a.	2,238	2,123	2,130	25	19	3,870	1,761	915	194	28	267	n.a.
1967	n.a.	2,166	1,624	2,290	30	12	4,192	1,633	1,069	215	29	245	n.a.
1968	n.a.	2,007	2,861	1,971	37	22	5,253	2,135	989	210	34	302	n.a.
1969	n.a.	2,030	3,658	1,776	44	19	5,981	2,067	470	187	35	367	n.a.
1970	n.a.	2,759	4,193	2,433	52	27	6,107	2,961	713	173	42	411	n.a.

1/ Quantity shown in 1,000 hides
2/ Quantity shown in 1,000 running bales

Note: n.a. - not available

forecasts indicate that Japan will be in the market for 4.5 million tons of U.S. corn for 1971.

Total imports of grain sorghum (milo) rose sharply in 1970 to about 3.8 million tons, compared with 2.9 million in 1969. The U.S. share of this market was about 57 percent--down from about two-thirds in 1969. The prospects for U.S. grain sorghum exports in this market in 1971 will depend largely on the availability of U.S. corn, possibly increased supplies among other exporting countries, and the extent to which the Japanese substitute grain sorghum and rice in the manufacture of compound feeds. Japan relaxed import restrictions on grain sorghum effective in April 1971. This may have some effect on imports in the current year.

Lemons: Japanese imports of lemons, solely from the United States, increased from $1 million in the late 1950's to $24 million in 1970. Lemons were removed from import quota allocations in May 1964.

Tobacco: U.S. exports of tobacco leaf to Japan have increased steadily since 1965 with the exception of a decline in volume in 1969. U.S. shipments of unmanufactured tobacco to Japan in 1970 totaled 27,000 tons valued at $61 million--a record volume.

Japan's imports of tobacco leaf in 1971 are forecast at 35,000 tons. The U.S. share of this market should be about 25,000 tons, down slightly from 1970.

Cotton: U.S. cotton shipments to Japan in 1970 totaled 713,000 running bales valued at $86 million. Both by volume and value, this trade was well above the low level of 1969. However, U.S. cotton exports to Japan in 1970 still lagged well behind the 1965-68 average annual trade $114 million. Much of this decline in imports of U.S. cotton resulted from keen competition with imports from Mexico and USSR in 1969 and larger imports of Indian, Pakistani and Middle-eastern cotton in 1970.

Soybeans: U.S. exports of soybeans to Japan have recorded steady increases. The United States furnished about 90 percent of Japan's total imports in 1970 of 3.2 million tons. Communist China supplied virtually all of the remainder; however, in 1970, minor imports of beans came from Canada, South Korea, and the republic of South Africa. Aggregate consumption of soybeans is expected to increase in Japan in 1971 by about 10 percent. Imports of 3.6 million tons are forecast to satisfy this demand.

Tallow: Total imports by Japan in 1971 are expected to be roughly 270,000 metric tons. In 1970, imports from the United States represented about 70 percent of the total trade of 257,000 tons. The United States is expected to supply about the same proportion of this market in 1971. Canada's share of the trade increased in 1970, while Australia's and New Zealand's declined slightly.

Aflafal Meal: U.S. exports of alfalfa meal and pellets to Japan have increased steadily since 1966. This item of trade in 1970 was valued at $24 million, double the 1965 level. The United States, which had roughly the entire market in the mid-1960's, faced some competition from Canada, Australia and New Zealand in 1970.

Cattle Hides: Despite competition from Canada, Australia, and New Zealand, the United States is by far the largest supplier of cattle hides to the Japanese market. Although the volume of U.S. exports has increased steadily in the past 6 years, the total value of the trade dropped slightly in 1970, reflecting somewhat lower prices.

Trade Liberalization

To comply with Japan's membership in GATT and the Internatioanl Monetary Fund, and after years of pressure to abolish controls, official Japanese statements indicate that 1971 will be the year when Japan adopts a policy of relaxation of import restrictions.

As of April 1971, 11 agricultural or food categories were scheduled to be removed from the quantitative import list. They were live horses, grapefruit, apples, frozen pineapple, vegetable oils, black tea, oilseeds (peanuts, rapeseeds and mustard seed for oil extraction) sausages, bases for beverages (non-alcoholic), lemonade, oilcake and meal (soybean, rapeseed and mustard seed). Official Japanese statements indicate that live cattle, live pigs, and pork will be removed from restricted status in September.

Although these removals of import restrictions appear to be significant relaxations, U.S. exporters are not apt to enjoy a "free" market in Japan for many farm commodities. When grapefruit is removed from quota restrictions it is doubtful trade will increase until there is a solution to the quarantine problem affecting exports of Japanese mandarin oranges to the United States. In addition, U.S. grapefruit entering Japan will probably be subject to seasonal tariffs during the peak of the U.S. grapefruit marketing season on the premise that this item competes with Japanese summer oranges.

Higher tariff rates are also being introduced for live animals (except breeding stock), pork and soybeans, thus nullifying some of the import liberalization policies Japan has so strongly emphasized in recent months. (Mary E. Long)

The Philippines: Economic Stabilization and Agricultural Trade

The economic stabilization program adopted by the Philippines in early 1970 contained measures important to the country's agricultural trade. The continuation, in general, of restrictive financial and commercial policies will in large part condition the prospects for Philippine agricultural trade in 1971. U.S. exports of agricultural products to the Philippines are expected to be little changed from $78 million last year. U.S. imports were $359 million in 1970. The United States is the major export market for Philippine agricultural products.

International Deficits and Inflation

Policies of economic retrenchment in the Philippines were necesitated in 1970 by a severe drain in foreign exchange reserves, maturation of heavy foreign debts, and domestic inflation that threatened to get out of control. Deficits in the balance of payments (BOP) on current account had been building up since 1966. From a $117-million surplus in that year, the Philippines shifted to a deficit of $304 million in 1968, mainly because of shortfalls in exports of coconut products, abaca, and sugar. Between 1968 and 1969, coconut product exports declined to $164 million from $236 million--an unusual situation in which a fall in export volume was accompained by a fall in the world market price. The BOP accumulated another high deficit of $285 million.

In this situation, a deflationary financial policy would have been appropriate to redirect the economy towards both internal and external balance. Contrarily, money supply was increased over 20 percent (mostly to finance government deficit expenditures), exacerbating the imbalance. Foreign exchange reserves dropped from $122 million at the end of 1966 to $76 million at the end of 1969 while foreign liabilities of the central bank more than tripled. As the BOP came under increasing pressure,

speculation against the peso, speculative buildup of inventories and heavy short-term borrowings from abroad took place, culminating with the prospect of over $500 million in amortization and interest payments falling due in early 1970.

Economic Stabilization Program

Import restrictions were imposed at the end of 1969, and on February 21, 1970, an economic stabilization program drawn up in consultation with the International Monetary Fund (I.M.F.) was promulgated in the form of Central Bank Circular 289. Strict controls were placed on external and domestic credit, imports of certain "non-essential" commodities were banned, new tax measures were introduced, government spending was cut back, and, very importantly, the official par value for the peso was abandoned, allowing the value of the currency to fluctuate freely in the open market. For major export items, part of the dollar receipts were retained and "sterilized" by the central bank to reduce windfall export earnings and reduce the flow of money into the domestic economy. The foreign debt, heavily weighted in short-term payments, was restructured through various creditor-country consortia, lengthening its average maturity.

Letting the value of the peso float freely in exchange was tantamount to a de facto devaluation of the currency. The peso rate of exchange per U.S. dollar immediately rose from P3.90, the original par value, to P6.00 and then P6.40 by the end of 1970. The cost of imports increased; the price of domestically produced commodities using imported materials increased roughly in proportion to the imported components embodied in their production, processing, and marketing; and the price of import-competing commodities increased as demand was diverted to domestic supplies. Export commodities became cheaper in terms of foreign currency and therefore more marketable.

By the end of 1970, the BOP deficit had been reduced to $3 million. Philippine data show that the balance of trade deficit on goods and services fell from $260 million in 1969 to $25 million in 1970--the result of a 20-percent increase in exports and a 6-percent decrease in imports. As anticipated, economic growth in real terms slowed to about 4.5 percent, from 6.3 percent in 1969.

Agricultural Trade

Under the stabilization program, agricultural commodity imports fell 7 percent to $140 million while exports improved by 20 percent to $400 million. U.S. agricultural imports from the Philippines reached $359 million from $285 million in 1969. U.S. agricultural exports were maintained at $78 million, giving the United States a larger share of the total market.

The availability of export financing under CCC credit and PL 480, both outside the Philippine restrictions, was important to U.S. exports. A Philippine central bank memorandum in March 1970 prohibited the importation of wheat, raw cotton, leaf tobacco, and tallow except under the U.S. CCC export sales program and provided that no wheat flour would be imported without prior central bank approval. U.S. wheat exports totaled $29.2 million in 1970, compared to $28.9 million in 1969. Wheat flour exports increased from $0.6 million to $0.8 million in 1970. Higher foreign exchange costs, higher flour prices, and generally lower consumer purchasing power brought about a 10-percent fall in per capita wheat flour consumption. Shipments of cotton increased from $11.8 million to $18.3 million in 1970.

Exports of other U.S. commodities were enhanced by a provision in Circular 289 that lifted the ceiling on import letters of credit. Important U.S. export items covered were raisins, meat, soybeans, edible tallow, and certain dairy products, totaling about $2 million in fiscal year 1969.

On the other hand, foreign exchange was not made available for imports of several important U.S. exports: dried and canned meat products except corned beef; prepared cereal foods; non-alcoholic beverages; and all fruits and vegetables except raisins, fruit peel, fruit juice concentrates, and white beans, chick peas, and green peas for food manufacturing. Exports of these amounted to about $10 million in 1970/71.

In July 1970, to raise still further the cost of import financing, a cash margin deposit of 30 percent (later raised to 50 percent) was established for import letters of credit.

Devaluation of the peso shifted upwards the demand for Philippine exports in terms of pesos and stimulated production by raising potential peso returns to exporters. At first, to limit the inflationary impact of windfall profits, Circular 289 required that 80 percent of dollars earned from exports of logs, sugar, copra, copper ore, and concentrates would be exchanged by the central bank at the former official rate of P3.90 to $1.00 and only 20 percent at the higher market rate of about P6.00 to $1.00. (Earnings from coconut oil exports could all be converted at the higher market rate, inducing expansion of local copra crushing facilities). In May 1970, the 80 percent exchange provision was replaced by an export tax law that further promoted exports. Major crops (those with a total export value of $5 million and above) were to be taxed at 10 percent of gross proceeds, and molasses, coconut oil, desiccated coconut, copra cake and meal, abaca fiber, leaf tobacco, and canned pineapple, at 8 percent. The tax is to be reduced 2 percentage points on July 1 of each year from 1971 through 1973, and completely eliminated on July 1, 1974. The government also enacted an export incentive law permitting certain income tax exemptions for new export-destined products.

The full advantages of policies to promote exports depend upon the elasticity of production. Fertilizer use increased 7 percent in 1970, despite higher prices, and agricultural production was expected to be high. However, typhoons late in the year dealt heavy damage to crops, including the export crops of abaca and coconuts. Consequently, abaca exports declined 7 percent in volume. Coconut production rose only 6 percent instead of the anticipated 10 percent from the low of 1969. Favorable prices caused the value of coconut product exports to increase slightly. Coconut oil exports rose to 325,000 tons from 214,500 tons but copra exports fell to 427,000 from 521,000 tons.

Sugar performed spectacularly in 1970. Cane production rose by 19 percent to a record 19.6 million tons. The Philippines was able to export $198.3 million of sugar versus $146.4 million in 1969, meeting its basic quota to the U.S. market and, in addition, its pro rata share of deficiencies from quotas of other producers. Banana production increased 11 percent and exports reached a record 50,000 tons--more than double the 1969 volume. Pineapple production increased 6 percent and exports of canned pineapple were 6 percent above 1969.

Outlook

The deflationary program undertaken in 1970 to stabilize the economy will likely be continued throughout the first half of 1971. But part of the potential comparative price advantage of devaluation has already been eroded by domestic price increases (20 percent as measured by both wholesale and retail price indexes) and wage increases. Wages rose in response to legislation in April 1970 that raised agricultural and industrial workers' minimum wages by a third. As prices and wages inflate relative to other countries, the advantages of the devaluation in promoting exports and restraining imports will be lost.

In mid-1971, some easing of domestic credit could occur as the Philippines' maturing debt obligations taper off. The Philippines is expected to obtain from the IMF an additional standby credit (third tranche credit) of about $42.5 million to support

the country in the difficult first half of the year. Some improvement in the GNP growth rate is anticipated in 1971.

Economic policy is geared to a 4-year plan for fiscal years (ending June) 1971-74, published in August 1970. The plan projects GNP growth at an average of 5.5 percent annually, compared to the average of 6.2 percent for FY 1966-69. Exports are projected to increase 8.5 percent a year while imports rise 5 percent a year.

The level of U.S. agricultural exports to the Philippines in 1971 depends partly on the rate of Philippine economic growth, but will be mainly a function of availability of CCC credit and PL 480. Wheat, cotton and tobacco exports to the Philippines are expected to approximate 1970 levels. A minimum of 150,000 tons of wheat will be imported from Canada under a 1969 credit arrangement, but the United States should maintain about two-thirds of the wheat market and 80-85 percent of the total wheat and wheat flour market. Philippine cotton imports likely will all come from the United States, but because of continued decreased consumption and larger beginning stocks, imports are expected to decline somewhat. Total U.S. agricultural exports are likely to be near $78 million.

Philippine agricultural exports in 1971 are not expected to greatly exceed $400 million, the figure for last year. Sugar production will probably increase at least 10 percent (one Philippine trade group forecasts 17 percent) and supply should be more than sufficient to meet the U.S. quota. Favorable prices this year will help boost sugar export value. Banana exports are likely to increase sharply despite lower production, because typhoon damage in 1970 did not extend to the large commercial plantations that produce mainly for export. But typhoons destroyed a fourth of the abaca acreage and, since it takes 18 months to harvest from new plantings, production and exports will be down sharply until 1972. Coconut production probably will approximate the 1970 level, and exports of coconut products could equal the 1970 volume, with relatively more copra than coconut oil compared to last year.

Philippine net export returns will be affected by the new higher tariff that came into effect January 1, 1971, in accordance with the 1955 Laurel-Langley trading agreement with the United States. Eighty percent of the full U.S. tariff is now applicable on Philippine commodities, compared to 60 percent between 1968 and 1970. Moreover, there is a further reduction of quotas for Philippine coconut oil, cigars, unmanufactured tobacco, and buttons and shells. Sugar, coconut oil, tobacco, plywood, canned pineapples, and embroideries will be among products most affected, with a loss in foreign exchange to the Philippines of about $20 million.

Laurel-Langley represents the only trade concessions granted by the Philippines to its trading partners, and the only long-term bilateral trade agreement of any significance to Philippine agricultural trade. Special concessions to other countries appear remote at this time because of the pressing need to limit imports from all sources. Under Laurel-Langley, the Philippine duty on U.S. articles has been 90 percent of the full rate since January 1965. When Laurel-Langley elapses in 1974, the full tariff will apply to both countries.

Philippine sugar exports to the United States--the sole export market--will continue to be governed by the U.S. Sugar Act through 1971. New amendments beyond 1971 are under consideration. (Robert D. Barry)

The Growing Market For Vegetable Oils In South Asia

Consumption of vegetable oils in South Asia (India, Pakistan, Ceylon, Afghanistan and Nepal) now surpasses 3 million tons. Use of vegetable oils in Pakistan more than doubled in the last decade, and it increased by more than a fourth in India.

South Asia imports around 15 percent of its vegetable oils, currently worth over $100 million a year. About 80 percent of the supply comes from the United States. India and Pakistan combined purchased about 260,000 tons of U.S. soybean oil in 1970. Coconut oil from Ceylon and sunflower oil from the Soviet Union are imported in smaller quantities. The upward trend is expected to continue, although imports in 1971 may not increase greatly because of excellent 1970 peanut crops. Afghanistan and Nepal are beginning to import hydrogenated vegetable oils. Ceylon, a net exporter of vegetable oils, takes some soybean salad oil from the United States.

Most shipments of U.S. soybean oil to South Asia in the 1960's moved through P.L. 480, but an impressive shift to cash purchases occurred in 1970. Fund limitations on P.L. 480 sales have restricted the quantity of vegetable oils obtainable through that method of financing. The shortage of foreign exchange restricts imports more than does the low income of consumers. Manufacturers of vanaspati, a traditional shortening, would like to import larger supplies of soybean oil than they are currently allowed to obtain foreign exchange permits for.

Vanaspati is a hydrogenated cooking shortening which is usually sold in sealed cans in cities of South Asia. The output of vanaspati in India now approaches 600,000 metric tons annually, almost double a decade ago. Consumer resistance to soybean oil as an ingredient has been overcome through advertising and educational services provided by manufacturers. The acceptance of soybean oil as an ingredient in vanaspati has led to the use of hydrogenated soybean oil for cooking purposes.

Prices for vegetable oils have skyrocketed in India in the last 2 years. The average wholesale price for peanut oil in Bombay currently exceeds the rupee equivalent of $600 per metric ton in the open market. This is almost double the price for imported soybean oil.

The use of vegetable oils in India in 1970 reached 2.3 million tons; about half was peanut oil. In addition, some 0.6 million tons of ghee and butter were consumed. The share of peanut oil will rise in 1971 and total use of all vegetable oils should increase by 10 percent.

Per capita consumption of edible oils and ghee approximated 11.4 pounds in 1970. This compared with 50 pounds in the United States. Ghee is the preferred cooking fat. It is a semiliquid, clarified form of butterfat from the milk of cows and buffaloes. Peanut oil is popular and is dominant among cooking oils in western India. Most of the coconut and sesame oils produced are used in southern India. Exports of vanaspati to Nepal are increasing.

Imports of vegetable oils have been on an upward trend in recent years and further gains are anticipated. Imports of soybean oil jumped from 36,000 tons in 1968 when some arrivals were delayed by shipping problems to about 130,000 tons in 1970. The United States supplies all imports of soybean oil, but some purchases from West European countries are likely in the next few years. However, imports of palm oil declined from 37,000 tons in 1963 to 1,465 tons in 1968 and increased only slightly in 1969 and 1970. Imports of peanut oil from West Africa in exchange for Indian manufactured goods are likely in the early 1970's, as all possible means of easing the shortage of vegetable oils are explored. India's exports of vegetable oils were significant in the early 1960's, but plummeted in 1965 and remained at low levels in the late 1960's.

Consumption of vegetable oils in Pakistan increased from about 220,000 tons in 1961 to almost 500,000 tons in 1970. Per capita disappearance increased from about 4.7 pounds in 1961 to about 8.5 pounds in 1970. The share supplied by imports doubled to about 25 percent, despite a relatively high import duty. Private companies have prospered as the demand for vegetable oils and vanaspati has increased markedly.

A shift from traditional chappaties to other products made from wheat in West Pakistan has accelerated the demand for cooking oils and shortening. The output of biscuits, buns, loaf bread, French bread and cakes has increased rapidly in Karachi, Lahore, and Rawalpindi. The use of cooking oils for preparing fried potatoes, egg plant, chicken, and rice has increased in all urban areas of Pakistan.

The shortage of vegetable oils in South Asia is likely to intensify in the next few years because of further increases in consumer demand, the stagnant level of production of certain oilseeds, and continued foreign exchange restrictions on imports. The so-called green revolution has been focused upon grain crops, and little attention given to oilseeds.

India, the world's largest producer of peanuts, produced a record 6 million tons in 1970. But, year to year variations in crop outturns are wide. Peanuts are mostly grown on non-irrigated lands and thus are highly subject to the vagaries of the monsoon. Yields are usually about one-third those obtained in the United States. Pakistan's production of peanuts increased from 32,000 tons in 1964 to about 132,000 tons in 1970.

Rape and mustard are grown during the winter in South Asia and rape and mustard seed oil accounts for about one-fifth of the vegetable oils used in India and about one-fourth in West Pakistan. The area planted to rape and mustard in India has remained relatively stable in recent years at about 7.9 million acres. Yields have improved slightly, but due to the growing needs of the rural population there has been no significant increase in deliveries to processors. The area planted in Pakistan has trended upward and totaled 1.9 million acres in 1967/68 when production reached a record 396,000 tons. Most of the increase in area planted in the last decade was in West Pakistan.

The output of cottonseed oil by processors in India has increased slightly in recent years and now approximates 100,000 tons annually. Production in Pakistan jumped from 67,000 tons in 1962 to about 107,000 in 1968. Cottonseed oil accounts for over one-third of the vegetable oil used in West Pakistan.

The output of coconut oil in India is increasing slowly and now exceeds 200,000 tons annually. However, the demand for coconut oil by soap and cosmetic manufacturers is increasing faster than domestic production. Pakistan must import nearly all of its coconut oil requirements. Ceylon is the major supplier to both India and Pakistan, but the Philippines and other Southeast Asia countries are also significant suppliers.

Ceylon's exports of coconut oil in 1966-69 declined sharply to less than 60 percent of the 120,000-ton level of 1964. An excellent coconut crop in 1969 provided supplies for a revival of coconut oil exports in 1970. New trade agreements are likely to result in larger shipments to Eastern European countries and reduce supplies available for export to India and Pakistan.

India and Pakistan are attempting to boost domestic production of oilseeds to close the growing gap between vegetable oil production and consumer requirements. The recent introduction of new oilseed crops has received considerable attention. In West Pakistan the government has given farmers free seed and fertilizer to grow sunflowers and the production of sunflower seed was estimated at 10,000 tons in 1969. Experiments with soybeans in West Pakistan have been encouraging in some areas between Lahore and Rawalpindi.

India plans a big push for soybean production, especially in the northern part of the Gangetic Plain. About 75,000 acres were planted to soybeans in the states of Uttar Pradesh, Madhya Pradesh, and Punjab in the summer of 1970. Most of the soybeans currently produced are used by the pharmaceutical industry. By 1973 India has hopes of

producing 3 million tons of soybeans, but that much that soon appears unlikely. The production of safflower also is receiving more attention.

The only way to solve the shortage in vegetable oils in South Asia, at least in the short run, is to increase imports of soybean and other vegetable oils. Imports will almost surely rise but shortages will likely continue. Balance of payments problems will probably necessitate continued restrictions on the use of foreign exchange for vegetable oil imports. (John B. Parker, Jr.)

Australia: A Growing Competitor for the United States in 1971

General Trade Situation

In 4 years, Japan has ascended to first place as a foreign market for Australia's farm products, pulling ahead of the United States in 1968/69. In 1969/70, Australian agricultural exports to Japan were valued at $483 million. The United Kingdom, prior to 1966/67 the largest foreign farm export customer, now has dropped to third place.

Total Australian exports in 1969/70 were valued at $4.3 billion, compared with $3.6 billion in 1968/69. Agricultural exports amounted to $2.4 billion, compared with $2.1 billion in 1968/69. Agriculture's share in 1969/70 dropped to 55 percent, a sharp decline from an average of 69 percent during 1964/65 - 1967/68. Exports of minerals, fish products, and manufactures have expanded.

Total exports to the United States since 1966/67 have averaged about $540 million. Meat, wool and sugar have accounted for over 55 percent of the total value during the past 3 years.

The United States, Australia's largest source of imports, accounts for about a fourth of the total. The United Kingdom furnishes a slightly smaller share. Japan accounted for 17 percent of Australia's imports in 1969/70. Agricultural commodities in 1969/70 accounted for only $36.4 million of total imports from the United States of $1.1 billion.

Competition with U.S. Farm Products in Third Country Markets

Wheat: The 1969/70 marketing year (ended November 30, 1970), was particularly favorable. Exports totaled 8.1 million tons, only slightly below the record 8.5 million tons exported in 1966/67. Larger shipments went to Mainland China, United Kingdom, Malaysia, Philippines, Singapore, Pakistan, Taiwan, and African countries. Increased shipments to the Middle East resulted from signigicant sales to the U.A.R., Iraq, and Saudi Arabia.

The availability of hard wheats from traditional U.S. sources in 1970, following difficulties with imports of U.S. wheat in 1969, lessened Japan's need for Australian grain in 1970. Larger imports of Australian wheat by Japan are unlikely in 1971, since Australian's 1970/71 production of prime hard wheat is expected to be the lowest in many years.

The 1970/71 wheat harvest is currently estimated at 8.4 million tons. Adding a carryover of 7.2 million tons from last year's crop gives supplies for the current marketing year of 15.6 million tons. With seed, food, and feed requirements totaling about 2.8 million tons and targeted exports at 7.3 million tons, the Australian Wheat Board hopes to cut carryover stocks at the beginning of the marketing season beginning December 1, 1971, to about 5.5 million tons--assuming that Australia will be able to negotiate a substantial wheat sale with Mainland China this year.

The excellent sales record during the 1969/70 marketing year caused farmers to press for higher wheat delivery quotas for the 1971/72 season. The government and the wheat growers' group agreed on a basic delivery quota of 339 million bushels of wheat for 1971/72. This quota includes a special 2 million bushel quota for durum wheat for New South Wales. This quota is about 21 million bushels larger than the one set for 1970/71 deliveries, and will stress the production of prime hard wheats which are in short supply. The special durum wheat quota established for the 1971/72 season indicates an effort to increase the production of durum wheat in Australia. Small quantities have been grown in the past for domestic use, but consideration is now being given to production of this variety for export as an added inducement for buyers to purchase a greater variety of grain from Australia.

Coarse Grains: With the possibility that corn blight will continue to affect the U.S. corn crop in 1971, farmers have given increased consideration to the diversion of land from pastures and wheat to the production of feed grains. The area planted to barley was about 40 percent higher in 1970/71 than in 1969/70. Oats plantings rose about 13 percent, corn by about 35 percent and sorghum as much as 70 percent. In consequence, the production of feed grains in 1970/71 will be well above a year earlier, providing adequate moisture conditions prevail.

This expanded production of coarse grains in 1970/71 is in anticipation of larger exports to Japan and possibly the EC countries. Potential market outlets for Australia's coarse grains will depend not only on U.S. corn production for export but also upon 1971 Argentine and South African corn and sorghum crops and their exportable surpluses.

Fruits: A record apple crop totaling about 26 million bushels is indicated for harvest in 1970/71, more than 15 percent above the record crop harvested 2 years before. Orderly marketing of this crop will be difficult. Exports for 1969/70 were approximately 5,000 metric tons above the previous year. There were increased shipments to Singapore, United States, Sweden, Norway, Hong Kong, Ceylon, Indonesia, Persian Gulf areas, and Africa. Traditional exports to Europe were limited by a dock strike in the United Kingdom and import licensing restrictions imposed by the EC. Canada also became a sizable market for Australian apples during calendar years 1969 and 1970.

Increased emphasis may be placed upon development of apple exports in 1970 to markets in the Middle East and Southeast Asia. Sales to Singapore and Malaysia increased significantly during the 1960's.

Pear production for 1970/71 is estimated at 8 million bushels--well below the 9.8 million bushels produced in 1969/70, but still about 3 million bushels above the small crop produced in 1968/69. The United Kingdom, the United States, and France were the 3 largest markets in 1970.

Because of uncertainties involved in export marketing of apples and pears, Australia will continue to subsidize fruit producers for losses resulting from the United Kingdom's currency devaluation in 1967. Compensation payments to apple and pear producers for the 1970/71 export season have been reported at $3 million.

Exports of dried vine fruits are forecast at 65,000 tons for the 1970/71 period--about 47 percent above the previous year. This trade is valued at $150 million and reflects a huge 94,000-ton crop of sultanas and raisins, double the low production in 1968/69.

Exports of canned fruits, particularly apricots, peaches, and pears in 1970/71, are expected to be larger than in 1969/70. The larger volume fruit packs resulted from

the increased production of pears and peaches in 1969/70. Apricot yields were also above average. The favorable export prospects for canned fruits has caused the Commonwealth Treasury to limit payments to offset devaluation losses to $112,000 in 1970/71, sharply below the $900,000 allocation in 1969/70 and $4.8 million in 1968/69. Australia's canned fruit shipments, mainly peaches, are providing increasing competition for U.S. exports in Canada and Japan.

Market Prospects for U.S. Farm Products in Australia

Cotton: The 1970/71 crop is the last one produced under the cotton bounty or subsidy legislation. The next crop will test the real efficiency of cotton production and will determine whether or not recent crops of 30,000 metric tons can be maintained. Production without subsidy may eliminate cotton from land better suited to other crops.

Future production prospects also will determine the future needs for U.S. cotton. Imports of U.S. cotton dropped from 22,000 bales in 1967/68 to 52 bales in 1969/70. Imports of U.S. cotton could be as high as 50,000 bales this year due to crop losses from flooding in New South Wales in early 1971.

Oilcake and meal: Despite efforts to promote oilseed production, Australia's imports of U.S. soybean meal have increased since the mid-1960's. During the past 4 years, imports of U.S. soybean cake and meal have averaged 25,000 tons per year, valued at about $3 million. This commodity is now one of the chief U.S. agricultural exports to Australia. Soybean meal is a protein feed favored by poultry and pig producers. Soybean production is gradually increasing in Australia after several years of experimentation. However, production is still largely limited to Queensland and to irrigated areas and it is doubtful that production will exceed 10,000 tons for several more years.

Tobacco leaf: Tobacco production has increased to an average of more than 30 million pounds in the past 4 years as compared with 10 million in the last half of the 1950's. Even with the increase in production, imports from the United States continue to average about 18 million pounds, worth about $17 million a year. Leaf tobacco accounts for about half of all agricultural commodities purchased from the United States. Imports have been generally well maintained considering that processors are required to take half of domestic production before they are eligible for rebates on tariffs charged for imported leaf.

U.S. Market for Australian Farm Products

Meats: Exports of beef, veal, mutton and lamb accounted for about $280 million, or 46 percent of total exports to the United States in 1969/70.

Australia's meat exports to the United States are subject to quota limitations under the U.S. Meat Import Act (P.L. 88-482) enacted in August 1964. For calendar 1971, the total global voluntary restraint for beef, veal and mutton set by the United States was 1,160 million pounds. Australia's share of this arrangement is 560 million pounds, or roughly 48 percent.

Meat exports to the United States during Calendar 1970 were disrupted by the U.S. Government's new meat inspection and slaughtering standards which required all suppliers, both at home and abroad, to adopt all measures necessary to comply with the U.S. Wholesome Meat Act. Actions under this program haulted Australian mutton exports for part of the year.

Sugar: Australia's sugar exports to the United States in 1971, as in the past several years, are subject to quota limitations. The quota assigned Australia for

calendar year 1971 is 194,965 short tons (raw value). Australia is the world's second largest exporter of cane sugar, with prospects for processing of 2.5 million tons of raw sugar in 1970/71, and should have no difficulty in meeting this commitment.

Wool: For the past 3 years, Australia's exports of wool to the United States have averaged 27,000 tons. This trade was valued at about $37 million.

Despite the continued decline in raw wool prices, in both Australia and New Zealand, wool sales to the United States are not expected to improve during 1971. Competition from synthetic fibers plus large carryovers of textile materials resulting from the 1970 economic recession may limit consumption of wool by U.S. manufacturers during 1971.

Deciduous fruits: Since 1967, Australia has developed a small trade in exports of apples and pears to the United States during the "off season" marketing period. Although exports of apples to the United States in 1969/70 were still below the half-million dollar level, exports of pears averaged 4,500 tons, valued at about $1.1 million during 1968/69 and 1969/70. (Mary E. Long)

New Zealand and Expansion of the EEC

Trade Prospects Uncertain

New Zealand since the late 1950's has been conscious of 3 serious problems related to its agriculture: undiversified production, overwhelming dependence on exports of butter, cheese and lamb, and the century-old reliance on the United Kingdom as a principal customer for farm exports.

The seriousness of this situation became more apparent as the United Kingdom moved to seek membership in an enlarged European Community. The United Kingdom has applied for membership in the EC 3 times in the past 10 years. Applications were denied in 1963 and 1967. In May 1970, the United Kingdom again petitioned for membership with Denmark, Ireland, and Norway. Negotiations, which began in June 1970, are still in progress.

On the 2 earlier occasions, when the U.K. applications were denied, New Zealanders drew momentary sighs of relief. They continued, however, to adopt policies of market diversification--particularly for meats and dairy products.

The current timetable for U.K.'s attainment of full membership in the EC may work to New Zealand's advantage. Should the U.K.'s application be accepted, a further 5-year transitional period is anticipated before the United Kingdom would receive full EC membership status.

If and when the United Kingdom becomes a member of the EC, New Zealand expects not only losses of markets for dairy products and meats, but also elimination of tariff preferences which have provided trading advantages to New Zealand and other Commonwealth nation suppliers since the early 1930's. Certain other trade advantages extended to New Zealand in bilateral treaty arrangements and import quotas for butter and cheese would also terminate.

The dairy policy adopted by the EC in 1966 provided for free movement of dairy products between the EC countries as of April 1968. This policy is based on a common system of target prices and protected levies upon imports. Such a policy would virtually eliminate imports from New Zealand. To date there is no Common Agricultural Policy

of the EC applying to sheep meats, but statements by EC officials indicate that a policy is expected to be adopted which will probably provide a system of levies.

In the initial negotiations between the United Kingdom and the EC, the United Kingdom was able to get a hearing for New Zealand government leaders who pleaded their own case with the EC. Commitments have already been secured from the EC Commission for a special arrangement for New Zealand in the finalization of negotiations with the United Kingdom, reduction of not more than 50 percent of New Zealand's butter exports to the United Kingdom during the 5-year transition period, and quantitative guarantees for continuing New Zealand's cheese exports to the United Kingdom throughout the transition period.

U. K. Market for New Zealand Products

The percentage of New Zealand's total export trade destined for the United Kingdom dropped from 56 percent in 1958 to 39 percent in 1969. This trade reflects some success in widening the range of products for export as well as the scope of export markets for beef, mutton, wool, and certain dairy products. However, despite market promotion efforts, the United Kingdom continues as New Zealand's largest market for dairy products and lamb. In pre-war years, the United Kingdom took 97 percent of butter shipments; 99 percent of cheese, and 99 percent of lamb and mutton exports. By 1969/70, the United Kingdom still received about 90 percent of butter exports, 80 percent of cheese, and 80 percent of lamb. Exports of lamb to the United Kingdom in 1969/70 were valued at $149 million. Shipments of this one commodity to the United Kingdom accounted for 12 percent of total exports of $1.2 billion in 1969/70.

This great dependence upon the United Kingdom as a market for livestock products, even into the 1970's, points up some of the difficulties that New Zealand anticipates when the United Kingdom becomes a member of the EC.

Agriculture Revamped to Fit Future Trade

For the past 7 years, New Zealand farmers have been actively engaged in farm expansion programs oriented toward increased production of livestock and horticultural crops. The ultimate goal of this program is increased exports to insure an annual growth of 4.5 percent in GNP. To achieve this target, emphasis will be given in the livestock sector to increased output of beef cattle and fat lambs. By the end of the 1970's, a larger share of export receipts is expected to result from exports of horticultural, forest, processed dairy products (other than butter) and manufactures. Less dependence will be placed on trade in butter and wool.

To achieve targets, total exports must increase more than 6 percent a year and livestock products must account for about half of the increase. So far these goals have been accomplished, but the likelihood of achieving the increased dairy production and fat lambs or sheep appears more difficult each year. Costs of fertilizer, machinery, and other increments of farm production are steadily rising. Somewhat higher prices are being recorded for butter, cheese, lamb, and beef but these are offset by lower wool prices. In the past year, drought affected pastures which required more grain feeding of livestock, thus increasing costs.

Shifts in Trade Patterns

Far East Markets: The most significant evidence of market diversification have been noted in the meat trade. In the late 1950's, more than 80 percent of mutton

exports went to the United Kingdom. By 1969/70 trade with the United Kingdom dropped to 17 percent and shipments to Japan increased to over 50 percent. Although lamb trade with Japan has not reached any sizable amounts, there has been an upward trend in shipments since 1967/68. Most of the difficulty in increasing meat exports to Japan centers around the tight quota restrictions maintained by Japan to protect the local livestock industry. Potential markets for meats, particularly beef and lamb, in other Southeast Asian countries have been slow in developing, mostly because of low incomes and reluctance to change traditional eating habits, which favor poultry and pork.

A few years ago, New Zealand had high hopes that as food consumption levels rose in the countries of the Far East, large new markets would be created for dairy products. But this trade did not develop because: (1) Japan established its own livestock industry with particular emphasis on dairying; (2) Far East peoples increased their fat intake by eating more vegetable oils rather than animal fats and (3) grains and fish continue as the main sources of protein.

Japan is, in most years, New Zealand's largest market for nonfat dry milk, but this trade fluctuates depending upon competition from other supplier nations, such as the United States and the EC, and on Japan's local production.

Although Japan is a large importer of wool, New Zealand wool shipments to that market tend to fluctuate. New Zealand wool in the Japanese market is highly competitive with Australian textile wools. New Zealand's specialty coarse wools used in carpets find keen competition from synthetic fibers in large consumer markets such as the United States, EC, and Japan.

United States: Increased demand for beef in the United States opened a market for New Zealand beef as far back as 1958. In the early 1960's, the United States became an outlet for about 90 percent of beef exports. Since the mid-1960's and the establishment of quotas under the U.S. Meat Import Act, the U.S. share of this market has declined to about 70 percent. However, total beef exports have materially expanded. The expansion of the market for beef in the United States has caused some farmers to concentrate on beef-cattle production, instead of dairying.

Market promotion activities to increase lamb sales in the United States and Canada have been underway since 1960. Although the growth in lamb shipments is still small, the prospects of increased trade in these areas appear promising for the 1970's.

The United States has been the third-largest market for New Zealand's wool since 1968--the EC is first, and the United Kingdom is second. Sales to the United States declined in 1969/70 while trade with Japan, USSR, and Eastern Europe increased. Despite the low prices prevailing for wool in recent years, the exports to major textile countries such as the United States, the United Kingdom, the EC, and Japan have not increased. This is due chiefly to the growth in the consumption of synthetic fibers.

Other Markets: A wide range of marketing outlets has been developed for New Zealand's nonfat dry milk and casein (both are associated with butter and cheese manufacture). Consequently, the diversion of trade in these products is not so compelling as development of new export outlets for such primary products as butter and cheese.

Prospects improved in 1971 for shipments of mutton to the USSR. During late 1970, the USSR bought beef and mutton from New Zealand to offset shortages in the Communist Bloc countries. Larger sales of lamb to Canada are also anticipated through wider use of air freighting.

With the shortages of beef for export from South American countries, New Zealand hopes to take up some of the slack in Western European markets in 1971. (Mary E. Long)

West Europe Expands Markets in Far East and Oceania

West European exports of agricultural commodities to the Far East and Oceania approached $500 million in 1970, almost double the value recorded in 1966. Commercial shipments accounted for over 90 percent of this trade. Japan, Australia, Hong Kong, the Philippines, Singapore, and South Vietnam are the largest markets. Wheat to India and Pakistan, wheat flour to Ceylon and Indonesia, and small shipments of dry milk to these same markets account for most of the food aid shipments. The upward trend is expected to continue mainly because of the growing demand for imported processed foods in prosperous cities of East Asia and larger food aid shipments to South Asia and Indonesia.

Programs to reduce the surplus wheat in France in the late 1960's led to a dramatic increase in French wheat exports to the Far East in 1969 and 1970. Europeans are promoting exports of dairy products, processed foods, and beverages through trade fairs, advertising, and favorable credit arrangements. Although West European agricultural exports to the region are currently only one-fifth the value of those of the United States, they are growing at a faster pace.

Japan's agricultural imports from West Europe increased from $66 million in 1966 to $151 million in 1969 and made further gains in 1970. Substantial increases in exports of processed foods which sell briskly in new Japanese supermarkets are anticipated by Europeans, as import quotas are revised upward. Popular European products include Norwegian and Dutch cheese, West German instant coffee, and refined sugar and Danish frozen chickens.

West European agricultural exports to Taiwan increased from about $2.5 million in 1967 to about $7.0 million in 1969, when French wheat deliveries were valued at $2.7 million. Exports to South Korea have more than doubled in the last 4 years. The value is still less than $2 million, and mainly consists of foods for sale to foreign residents and tourists.

Hong Kong's imports of agricultural commodities from West European countries increased from $24 million in 1966 to $35 million in 1969 -- the Netherlands, United Kingdom, and Denmark were the major suppliers. West European poultry accounts for about one-third of Hong Kong's imports of this item -- Denmark is the leading supplier, followed by West Germany. About 80 percent of the Colony's preserved milk supply comes from Western Europe. Other important items include chocolates, canned pork and other meats, and canned vegetables.

Nearby Macau is a rapidly growing market for European processed foods and beverages. From their sales offices in Macau, the Portuguese have been able to increase their exports of wine and canned vegetables to many markets in the Far East.

Total agricultural exports by the European Community and European Free Trade Association countries to Singapore increased from $22 million in 1967 to $28 million in 1969. France ranks next to Australia as Singapore's major source of wheat flour. West Europe accounts for almost half of the value of preserved milk imports. Denmark's food exports to this market reached $6.3 million in 1969, triple the 1966 level, mainly because of larger deliveries of frozen poultry and dairy products. Malaysia imports over $20 million of agricultural commodities annually from Western Europe, including dry milk from the United Kingdom and butter from France and the Netherlands. Imports of wheat from France and frozen chickens from Denmark are increasing.

High import duties on processed foods have limited exports to Thailand. However, prosperity in Bangkok and a growing need for high quality products by tourist hotels has spurred the demand for dairy products, instant coffee, canned meat, and beverages. West European exports of agricultural commodities to Burma have doubled since 1967. They are now valued at about $5 million annually. The Danes sent $1 million worth of dry milk in 1969 and expanded their market there in 1970.

Exports to South Vietnam have quadrupled since 1967 and currently exceed $25 million annually. Merchants catering to American servicemen account for part of the rise. Dry milk makes up one-third of this trade and refined sugar almost another one-third. Dutch canned meat and French bakery products are other items of importance. France shipped 4,500 tons of barley to South Vietnam in 1969. Exports of French and Italian wheat flour to Cambodia were valued at about $1 million annually in the late 1960's. Even isolated Laos has been a steady market for Dutch and West German beer. France sent small quantities of wheat flour to Laos in the late 1960's.

Indonesia's imports of agricultural commodities from Western Europe are estimated to have more than doubled between 1967 and 1970. Wheat flour imports, which account for close to half of this trade, increased sharply in the late 1960's to an annual level of more than 50,000 tons. Dry milk, rice, and processed foods are also significant items. In 1969, the Netherlands, France, and West Germany each sent 15,000 tons of wheat flour to Indonesia, and Italy and Belgium each sent 5,000 tons. Also in 1969, France and Italy sent 32,600 tons of rice. Italy sent about 40,000 tons of rice in 1970. The Dutch supply most of the powdered milk, bakery products, beer, and processed foods imported from Europe.

France shipped 118,500 tons of wheat to the Philippines in 1969 as new flour mills expanded their operations there, but European exports of wheat flour to that market have declined recently. Dry milk accounted for almost half the $32 million worth of agricultural exports West Europe exported to the Philippines in 1969.

South Asia is receiving more food from the EC as a result of plans outlined at the Food Aid Convention in Paris in 1969. Exports of agricultural commodities by the EC countries to India increased from $4.4 million in 1967 to $11.5 million in 1969. Wheat accounted for $8.3 million of the 1969 total. Exports to Pakistan increased from $4.1 million in 1967 to over $12 million in 1970, when wheat accounted for over 70 percent of the value.

During 1970, the EC sent approximately 100,000 tons of wheat to India and close to 100,000 tons to Pakistan. Deliveries to East Pakistan are likely to exceed 125,000 tons in 1971, partly because of shipments for relief to victims of the November disaster. Afghanistan expects to receive about 40,000 tons of wheat from the EC in 1971 to cope with the serious shortage in foodgrains.

Australia's imports of agricultural commodities from West Europe have increased by more than a fourth in the last 4 years, to a value of about $40 million annually. Efforts to provide a variety of imported products in supermarket displays and consumer preferences for certain brands of cheese, bakery products and high quality foods have contributed to the increase. West Europe supplies about three-fifths of Australia's imports of cheese, which exceed $5 million annually. About half of the imports of bakery products, which exceed $4 million annually, also comes from there. The increase in imports of oriental type tobacco from Greece in recent years has resulted from efforts by Australian manufacturers to meet the demand for more blended cigarettes.

New Zealand's agricultural imports from West Europe currently exceed $10 million annually, up one-third from 4 years ago. Some of the leading items include cocoa from the Netherlands, pedigreed breeding stock and refined sugar from the United Kingdom, and wine from France, Italy, and West Germany.

The boom in tourism and lower air cargo rates have contributed to the increase in exports of certain European products to the region. Tourism is growing rapidly even to previously remote places such as Nepal. Although European and American tourists visit remote places, they seem to prefer familiar foods and beverages. A marked increase in exports of European cereal preparations, especially breakfast cereals and bakery products to the Far East, is closely related to the tourist trade. West European wines shipped to the Far East reached a value of $8.5 million in 1969, almost double the 1967 level. (John B. Parker, Jr.)

Agricultural Outlook for the Far East and Oceania

General Economy

Continued economic growth is forecast for most Far East and Oceania countries in 1971. The largest gainers will probably be the countries of East Asia (Japan, Korea, Taiwan, and Hong Kong) and Singapore. Little economic progress can be expected in war-torn Cambodia, Laos, and South Vietnam. Internal political problems are likely to hold economic development in Pakistan below the levels achieved in recent years. For most of the other developing nations of the region a modest rate of growth is the general prediction for 1971.

A controlled restriction of economic growth to curb inflation is expected in the 3 developed nations of the area--Japan, Australia, and New Zealand.

Since agriculture plays the dominant role in the economies of almost all the developing nations, it will continue to receive top priority in economic planning for 1971 and beyond.

Agricultural Production

If average or better weather prevails, total farm production in 1971 can be expected to rise in most of the developing countries of the region. The economic development plans of these countries generally call for an average annual increas of 5 percent or more in farm production. More capital farm inputs will be available. These countries are giving high priority to making available ever-increasing supplies of fertilizer, pesticides, irrigation equipment, improved seeds, and other inputs to raise farm production. Major emphasis generally continues to be placed on boosting the outturn of foodgrains, but increasing attention is being given to diversification and to export crops that earn much-needed foreign exchange.

The world rice situation has changed from one of shortages to one of adequate supplies. Less emphasis than in the past will be placed on this most important food commodity. Malaysia, for example, is reconsidering its development plan goal of full self-sufficiency in rice. In Taiwan, the planted-area goal for rice for 1971 has been reduced by 5 percent and the production goal by 2 percent below the 1970 goals.

The outlook is for increased production of a variety of important export crops in the developing countries. Rubber output in Malaysia, the world's leading producer, will continue on an upward trend. This is assured by the past large-scale replantings with high-yielding clones and the continuance of this program. Malaysia is also the world's leading producer of palm oil. Due to the unprecedented plantings in recent years, a rapid increase in the annual outturn of this tree crop is virtually certain. Corn production will be up in 1971 and the following years in Southeast Asia, particularly in Thailand where it has become a popular cash crop with farmers. A bumper 1971 coffee harvest is forecast in India. The Philippines anticipates a record 1970/71 outturn of sugar.

Total agricultural output in 1971 in the 3 developed countries is expected to be only slightly above the 1970 aggregate. In Japan the outlook is for increased production of livestock and meat products and fruits, but a decline in crop production, highlighted by further reduction in rice. The government is striving to divert lands from paddy to bring rice production in line with consumption requirements. Quotas will again be in effect and may tend to curtail wheat production in Australia, but plantings of barley, oats, grain sorghum and corn are all up and a substantially higher level of production of feedgrains can thus be anticipated in 1971/72. Australian beef, egg, pork, and mutton production will all likely show gains during the current year. Dairy outturn will be somewhat lower, due to government efforts to align production with limited market prospects. Australia's apple crop will be a record but pear production will be lower than last year's output. Due in large measure to increasing competition from synthetic fibers, the long-term outlook is not encouraging for the important raw wool-producing industries of Australia and New Zealand. In the latter country, more farmers are expected to shift out of wool production into fat lambs and dairy-beef enterprises. A continued growth in livestock numbers is anticipated there. Beef cattle numbers in Australia are projected to continue on an upward trend.

Imports

A record total value of imports of agricultural commodities is forecast for 1971 for the countries comprising the Far East and Oceania region. The United States will continue to be the most important supplier. Major agricultural exporters within the region, Australia, New Zealand, and Thailand will account for substantial imports by other countries in the region. Foodgrains, mainly wheat and rice, will continue dominant in 1971. The trade in the current and following years, however, will increasingly reflect the diversifying and upgrading of diets that almost all countries are witnessing. The most rapid dietary changes are taking place in the Far East countries where incomes rise fastest. An increasing portion of imports will consist of feed grains for domestic production of livestock and poutlry products, vegetable oils and oilseeds, dairy products, and fruits. In 1971 the import demand for raw cotton is expected to continue strong.

Exports

Despite gains for some important commodities, the total value of agricultural exports from the region is unlikely to change substantially in 1971. For certain commodities, even where significant production increases are recorded, exports will stabilize or even decline due to growing domestic demand. An example is India where, despite a record 1970/71 peanut harvest, domestic demand keeps local prices noncompetitive in the world market. Some increase in volume of exports and export earnings from rubber and palm oil from Malaysia is likely in 1971, as are larger exports of jute and coffee from India, canned pineapple from Malaysia and the Philippines, sugar from the Philippines and Taiwan, corn from Thailand and Indonesia, bananas from the Philippines, and fresh citrus fruits and pork from Taiwan. The volume of wheat exported by Australia will probably be moderately lower in 1971. Abundant supplies, restricted import demand and consequent downward pressure on international prices may result in somewhat lower earnings of foreign exchange from rice exports by Southeast Asian countries and wool shipments from Oceania. (Clarence E. Pike)

U.S. Department of Agriculture
Washington, D.C. 20250

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☆ U. S. GOVERNMENT PRINTING OFFICE : 1971 431-345 (ERS-170)